

# MANUFACTURERS RECORD

A Weekly Newspaper Devoted to the Industrial, Financial, Railroad,  
Mining, Contracting, Engineering, Building, and General  
Business Interests of the South and Southwest

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BALTIMORE, NOVEMBER 16, 1916



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# MANUFACTURERS RECORD

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER

Trade-Name Registered in the U. S. Patent Office

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## A STRAIGHT DEFIANCE OF THE SUPREME COURT WHICH WOULD MEAN ANARCHY.

**W**HAT the Supreme Court does with the law is no concern of ours. We have demanded fair working hours, and we are going to get them."

That is the statement made by W. G. Lee, president of the Brotherhood of Railroad Trainmen, as quoted in a dispatch from Cleveland, Ohio, to the daily papers of last Sunday. That a statement practically defying the Supreme Court should be issued by any man or any organization in this country would be incomprehensibly amazing if it were not simply the natural outcome of the position taken by the trainmen when, holding up the country as at the point of a pistol, they demanded legislation or else threatened a nation-wide strike for the purpose of starving the country into yielding. No more revolutionary situation ever developed in this or any other country. It was revolution pure and simple. Some men tried to defend it, but the spirit in which four men held up the nation is fairly illustrated in the statement from Mr. Lee, in which, defying the Supreme Court, he says:

"What the Supreme Court does with the law is no concern of ours. We have demanded fair working hours, and we are going to get them."

Those who yielded to the trainmen will now be forced to realize that he who yields the right for expediency, sooner or later has to pay the penalty. Continuing his statement, Mr. Lee said:

"Any railroad which attempts to cancel the present schedule of hours and pay, or refuses to put the eight-hour law into effect, will find itself with a strike on hand."

The power that was given us last spring when the employees voted to strike unless the railroads granted our demands is just as good now as it was then, and will be called into play if necessary.

\* \* \* When January 1st arrives the country will face the same situation which existed when President Wilson, to prevent a country-wide railroad strike, forced the Adamson law through Congress."

This is the frankest confession, we believe, ever made by any revolutionary leader. It would do credit to any of the revolutionary leaders of revolution-cursed Mexico; but that it can be made in this country by the leader of an organized band which announces its determination to defy the Supreme Court, and says that what the Supreme Court does with the law is no concern of theirs, must give serious concern to every thoughtful citizen, regardless of what may have been his views in the past in regard to the action of Congress on this subject.

Never before, we believe, has any man in this country dared to openly defy the mandate of the Supreme Court; and when the Supreme Court decision is not final, then democracy has ended and the Republic will exist in name only.

## A Prediction—The Proposed Government Armor-Plate Plant Will Be Built in the Interior.

**W**HEN Secretary Daniels proposed the building of a Government armor-plate plant the MANUFACTURERS RECORD vigorously supported the measure and pointed out how, viewed from every angle, the establishment of such a plant was wise as a matter of necessity for the safety of the country, unless existing armor-making concerns would agree to establish a plant in the Central South or West, far away from the coast, and not dependent upon Lake ores. The suggestion of Secretary Daniels was for an armor-plate plant without any plan for its location. The MANUFACTURERS RECORD proposed that it should be built in the interior.

The Bethlehem Steel Corporation led the fight against the establishment of a Government armor plant, but the statements put forth by the MANUFACTURERS RECORD as to our danger by reason of the fact that the iron and steel industry of the country is to an extent of about 90 to 95 per cent staked on Lake Superior ores, carried conviction to all unbiased investigators who gave a careful study to the situation. The supply of these Lake Superior ores could be cut off at any moment, and as all existing armor-plate plants are located in one State, which is dependent for practically its entire iron-ore supply upon Lake Superior, or upon foreign ores, the situation was pointed out as a serious menace to the country.

Congress wisely passed a bill for the building of a Government plant, and a board composed of some of the ablest naval officers of the country has been engaged in studying the question as to where this plant should be located. The members of this board have been furnished from time to time with all the facts gathered by the MANUFACTURERS RECORD as to the danger of existing conditions and the importance of bringing about a change. These facts are unanswerable, and the MANUFACTURERS RECORD feels absolutely certain that the wisdom of this board will find expression in selecting a site somewhere in the interior, far away from the danger of an invading army.

As we have repeatedly stated, the MANUFACTURERS RECORD has not advocated any particular site or State in the South. It has said that this plant should be located in the interior, where coal and iron ore are available; that it should be beyond the mountain range, which would be a safeguard against invasion; but that whether the plant be located in the interior of the South, or even as far out as Colorado, was immaterial, so long as it was established away from the coast and from dependence on Lake ores.

With entire confidence in the correctness of this position the MANUFACTURERS RECORD awaits the decision of the board having the matter in charge, feeling absolutely certain that the members will not make the mistake of being moved by the influences which have sought to secure this plant for the seaboard. No more serious mistake could be made than to put it anywhere near the seaboard. To do that would be to commit a monumental blun-

der on the part of the Government. The chief justification for the building of such a plant is not the possibility of saving a few dollars per ton on armor. The cost of armor plate is an immaterial factor as compared with the importance of having a plant away from existing plants and subject to the dangers which necessarily confront them.

The attempt that was made to create the impression that established plants would have to go out of business if the Government built an armor plant was misleading from beginning to end, for it was well known that this country was entering upon a period of naval expansion which would more than tax the productive capacity of every armor-plate plant in the country; and that this naval expansion would be on a scale sufficiently large to keep every armor plant busy to its capacity, and yet leave ample room for the entire output of a Government-owned and operated plant.

The danger of continuing our munition-making business on the Atlantic seaboard, and of permitting the continued concentration of our iron and steel business in a section wholly dependent upon Lake ores, is so great that the failure of our people and of the Government to bring about a change can only be accounted for by our failure to learn from the sad lessons of Belgium and France, where the capture of a large portion of their iron and steel industry almost resulted at the start in the complete overrunning of these countries, and thus the changing of the world's civilization.

This country necessarily is facing dangers to which we cannot shut our eyes without unspeakable folly.

We are drawing to ourselves the wealth of the world."

We have probably one-third of the world's accumulated wealth.

We are piling up gold beyond anything that was ever known in human history, and we are concentrating our whole thought and energy upon money-making in this time of war-created prosperity.

Is it possible to imagine that when Europe has settled its own quarrels it will not find excuse to attack us and take from us this accumulated wealth, if it then finds us as weak and helpless as we are at present, rolling in wealth but unable to defend it?

The movement for a Government-owned armor plant is one of the first essential steps to carry into the interior the building of industries of this kind, and the Manufacturers Record ventures the prediction, without a single thought of being mistaken, that this plant will be established and that it will be located in the interior, and that the naval officers to whom has been committed a decision of such far-reaching importance will select some site in the interior and be able to present unanswerable reasons as to the wisdom of their selection.

It is possible that the Bethlehem interests will continue to fight a Government-owned armor-plate plant, as that company has heretofore done. It is

possible that the newspapers of the land will again be filled with the advertised arguments of the Bethlehem company against the Government undertaking a work of this kind. But when the board of which Admiral Dewey is chairman, having this matter in charge, has made its complete report, we venture to say that people as a whole, outside of the limited circle which for selfish reasons has sought to thwart this plan, will recognize its wisdom.

The Government builds many of its big guns, and no one, we believe, has questioned the wisdom of its doing so.

The Government makes much of its powder, and, we believe, no one has taken the position that this was unwise or improper.

The Government makes many of its small guns or rifles, and the wisdom of this, we believe, has not been questioned.

The Government owns great dry docks for the docking and repair of ships, and no one has suggested that this is unwise.

The Government has a number of large shipyards and builds some of its battleships and other naval vessels; and while efforts have been made to show that this should not be done, no one has questioned, so far as we can learn, the Government's ability to secure experts abundantly able to design and build such ships in competition with the ablest experts in private yards. But one of the arguments raised against the Government building an armor plant is that it could not secure the high-grade expert work which was at the command of private plants.

The MANUFACTURERS RECORD does not believe that the Government should undertake to build all of its own ships, to make all of its own powder, or build all of its own guns, or to make all of its own armor plate. It does, however, believe that as war is a Government business, pure and simple, the Government through its own men should be in the closest touch with the actual practical working of armor plants and shipyards and gun-making establishments, and that to a limited extent at least it should operate its own plants for the production of war supplies, whether of naval vessels or guns or powder.

Entirely outside of these conditions, however, is the supreme question of developing some of these industries far away from the coast, which is absolutely essential to the safety of the nation; and as the great leaders in iron and steel and munition-making have taken no step whatever looking to the creation of such enterprises in the interior for the safety of their own business and the protection of the nation, the Government in self-defence should do what they have thus far by their action refused to do. It is to be regretted that the great steel organizations of the country have been so short-sighted that though they recognize the seriousness of this situation, they have made no move to overcome it. They are thus forcing the Government to do what some of them have been protesting against the Government's doing.

#### THE MEXICAN QUESTION AS IT AFFECTS OUR LATIN-AMERICAN TRADE .

**A**GAIN Señor Luis Cabrera delivers an announcement to the American public. Mexico is now pictured as our ally. In any foreign crisis she is to recognize "complete continental solidarity" as the principle determining her attitude toward foreign powers. The gentlemen of the American Academy of Political and Social Science in Philadelphia, before whom Señor Cabrera expounded this reciprocal to the Monroe Doctrine, may be suspected of feeling that the head of General Carranza's Peace Commission was the herald of a new era of good feeling throughout the Americas.

Beyond question the ultimate good of Mexico, and of every Latin-American country, lies in making of the Monroe Doctrine a Pan-American doctrine. We would welcome the genuine conversion of Señor Cabrera to the principle of such an American solidarity. Unfortunately, the echo of his recent utterance, suggesting that we fling back across the Rio Grande the political exiles who harrass the Carranza administration by hostile criticism in this country, has not yet died out. It is perfectly understood that political exiles returned by us to Mexico would be shot. The United States does not recognize that political opponents of a revolutionary movement, even though it be in the ascendant, are traitors to Mexico and deserving of execution. This method of pacifying obstreperous Mexicans is not in accordance with the fundamental principles of liberty and democracy upon which this Republic was founded, and for the preservation of which the Monroe Doctrine has stood in the minds and hearts of the people ever since it was promulgated.

The history of Mexico does not sustain the argument of Señor Cabrera. A united Mexico, convinced of the evils of European domination, could have withstood the invaders of 1863. The empire of Maximilian became very firmly established, from Yucatan to Sonora, because of willing Mexican imperialists. There were patriotic bands contesting in the field, to be sure, and they have since been duly honored. The birthday of the great anti-imperialist, Benito Juárez, is second in importance as a Mexican national holiday only to the Day of Independence. What positive assurance can be given that Mexico would not develop a dangerous affection for the Japanese in the event of trouble between ourselves and the empire of the Mikado? How will Señor Cabrera explain the universal enthusiasm for the Japanese that exists among all classes in Mexico today?

We believe that an unfortunate condition exists, which must be frankly summarized as active hostility against us in Mexico, and passive contempt for Mexico in the United States. Of the two, contempt is perhaps the most difficult to eradicate. We do not fear the hostility of Mexico. The indifference of the American people toward the Mexican problem and the trifling with the Mexican situation constitute the great menace to the re-establishment of cordial relations with our Southern neighbor and to the creation of such a reciprocity of feeling toward the maintenance of an inviolable America as that indicated by the Mexican Commissioner.

Cordial relations come through cordial intercourse. An understanding of each other's political sentiments, a belief in a disinterested purpose to mutually guarantee the territorial integrity of the members of the Pan-American family of Republics, will come about through intimate commercial and financial relations, sustained by practical diplomatic co-operation. The National City Bank has done more to cement the United States and South America than all the long series of unvital Pan-American Congresses, by means of its branch banks in Buenos Aires and Rio de Janeiro.

Competitive commerce leads to war; reciprocal commerce leads to friendship. The European Armageddon is an example of the former; the century of peace between the United States and Europe, an example of the latter. Commerce between the United States and Latin America, so far as it exists, is essentially reciprocal. It should lead to the profoundest friendship. What we discover, in fact, is that the friendship of the Latin American nations is extended most conspicuously toward Europe, while our adventures in Mexico in 1848 in Porto Rico and the Philippines in 1898 and in Panama in 1903, have developed a fear of us as possible aggressors, indifferent to our neighbors' territorial rights. We have emulated the adventurous voyagers of Spain and Portugal in our quest of the disappointing riches of Cathay, while we have spurned the larger but unct jewel of Latin-American trade. Moreover, no matter what we may think of the case, our unstatesmanlike dealings with Mexico have been construed as an evidence of want of good faith by the whole of South America. As a nation, and as individual solicitors of trade, we are under suspicion. Confronting the greatest opportunity we

have ever had to entrench ourselves in the commerce and good-will of Spanish and Portuguese America, while the normal course of business with Europe has been interrupted, we have indulged in such a combination of sentimental dalliance and armed reprisal in Mexico as to alarm the whole Southern Continent, regarding our ultimate motives. Fine speeches will no more erase the fact that we have pursued a wrong course than will Señor Cabrera's well-turned phrases in Philadelphia convince the American people that Mexico would stand by us in the event of a foreign war.

As a mere business proposition it is now time that we should settle this Mexican question, justly and conclusively. A brilliant stroke of wise and practical statecraft displayed at the present time in dealing with that problem would lumen up our relations with fourteen other nations whose trade would be worth millions to our manufacturers, and whose friendship would bring about a genuine solidarity which would help insure the peace of the Americas and the peace of the world, so far as the external relations of these countries constitute a political world-factor.

President Wilson has sounded the keynote of more rational policies, in which we are pleased to hope, by flatly declaring that "we must think not of parties, but of the interest of the great country we all love." He urges us to "unite for common service." Taken in its wider implications, no better plank for a national platform could be adopted. We may not insist too strongly upon the confession involved in the Williams College speech that the President had been playing politics before the election. He may now attack the Mexican problem with a sincere purpose to settle it wisely and unlock the opportunities of close commercial and friendly relations with South America. He has no election to win; he has only to fear the judgments of history, the severity of which no man better knows than he. No question of bad Americans, who invested money in Mexico and wanted protection, need now be brought into the case; no question as to discrimination between the several blood-stained chieftains need be made. He can simply insist upon a correct legal status for any person who pretends to deal with us in the name of that Mexico officially known to us only through our treaties, and we can stand firmly on those as limiting our international relationship, and as establishing the reciprocal rights and obligations of each country and its people one to the other.

It is time, Mr. President, to settle the Mexican question! Our business interests demand it; the opportunity of commercial expansion in Latin America is more to us than the Jewelled Orient. The object of government is to make easier the problem of existence; and our expanding population and expanding manufactures require wider markets. When the call for war material ceases we will look regretfully at our lost opportunity in South America.

Settle the Mexican question, Mr. President, so wisely, effectually and conclusively that all doubt as to our motives shall disappear; and do it now! Then we will find a new welcome throughout Latin America, a whole continent of growing opportunity for our goods, our capital and our peaceful energy.

#### IMPORTANCE OF IMPROVEMENT OF AMERICAN WATERWAYS.

**A**N official call has been issued for the 13th Annual Convention of the National Rivers and Harbors Congress, to meet in Washington December 6, 7 and 8. At this meeting a vigorous presentation will be made of the importance to the entire country of the development of the waterways of the United States.

At the coming convention facts will be presented to show what European countries have done and are even now carrying out in the way of improving water transportation, even at the height of the gigantic war in which these countries are involved. The work will be educational in the direction of combating the ignorance and prejudice which have become popular in many quarters, manifested when expenditures for making completely navigable the streams of this country are involved.

## Heavy Decrease in Crops, Followed by Great Increase in Values: A Condition from Which No Relief Can Be Found Except in Bumper Crops Next Year.

**UNFAVORABLE** weather conditions cut short the production of grain and other foodstuffs this year to an extent that has rarely ever been seen in the history of the country. Last week the MANUFACTURERS RECORD showed that measuring the wheat crop by pounds, since the quality this year was lower than that of last year, there would be a total yield of only 547,000,000 bushels as compared with 1,011,000,000 bushels last year. This loss would alone have resulted in a very heavy increase in the price of wheat, for it means almost famine conditions in wheat as compared with normal crops, but there was at the same time a decrease of 411,000,000 bushels of corn, a decrease of 311,000,000 bushels of oats, 54,000,000 bushels of barley, 7,300,000 bushels of rye, and 4,300,000 bushels of buckwheat.

The total grain crop of the United States as estimated by Government returns on November 1 was 4,777,000,000 bushels as compared with a total crop in 1915 of 6,023,000,000 bushels, a decrease of 1,246,000,000 bushels.

Even these figures, showing the staggering loss in grain production, do not tell the full story, for other food crops suffered in the same way. The yield of white potatoes this year was 70,000,000 bushels short of last year; the yield of sweet potatoes, a standard crop of the South, was 6,600,000 bushels short. There was a decrease of 26,500,000 bushels of peaches, and a decrease of 8,900,000 barrels of apples, while even pears showed a decrease of nearly 900,000 bushels.

Summing up the situation, the decrease shown in grain and other foodstuffs was as follows:

Crop.	Decrease.
Corn	411,027,000 bushels.
Wheat	403,948,000 "
Oats	311,180,000 "
Barley	53,473,000 "
Rye	7,306,000 "
Buckwheat	4,322,000 "
Kafirs	53,436,000 "
White Potatoes	70,139,000 "
Sweet Potatoes	6,632,000 "
Peaches	26,549,000 "
Pears	839,000 "
Apples	8,975,000 barrels.

Reducing the decrease in apples to bushels instead of barrels, here is a total falling off in the grain, potato, peach, pear and apple crop of nearly 1,375,000,000 bushels. It is a disaster which spells short supplies at high prices for at least the next 12 months, and nothing but bumper crops next year can overcome this situation and restore prices to normal conditions.

Rice alone shows a gain amounting to 4,000,000 bushels, and rice, which ought to be one of the staple food supplies of the country, has as yet had no marked advance in price in keeping with the advance in other food supplies.

The production of these staple crops, as based on the November 1 estimate of the United States Department of Agriculture, the value of the crops on the basis of prices then ruling, the total production of the crops in 1915 and their value as estimated by the

ESTIMATED PRODUCTION AND VALUE, NOVEMBER 1, 1916, OF PRINCIPAL CROPS OF UNITED STATES COMPARED WITH VALUE NOVEMBER 1, 1915, AND PRODUCTION OF FINAL YIELD IN 1915.

Crops.	Production		Value		Production		Value		Production		Value	
	1916.	Nov. Estim.	Nov. 1.	Final.	1915.	Nov. 1,	1916.	Decrease,	1916.	1916.	Increase,	1916.
Corn (bu.)	2,643,518,000	\$2,246,981,800	3,054,535,000	\$1,890,757,165	411,027,000	\$356,224,635						
Wheat (bu.)	607,557,000	962,370,288	1,011,505,000	941,711,155	403,948,000	20,659,133						
Oats (bu.)	1,229,182,000	602,299,180	1,540,362,000	537,586,338	311,180,000	64,712,842						
Barley (bu.)	183,56,000	152,70,1952	237,009,000	118,741,509	53,473,000	33,980,443						
Rye (bu.)	41,884,000	48,250,368	49,190,000	42,155,830	7,306,000	6,094,538						
Buckwheat (bu.)	11,447,000	11,778,963	15,769,000	12,378,665	4,322,000	*599,702						
Potatoes (bu.)	288,964,000	392,124,148	359,103,000	218,334,624	70,139,000	173,789,524						
Sweet Potatoes (bu.)	67,663,000	54,536,378	74,295,000	47,325,915	6,632,000	7,210,463						
Hay, tame (tons)	86,155,000	920,135,400	85,225,000	922,986,750	†930,000	*2,851,350						
Hay, wild (tons)	20,70,000	c145,70,200	21,491,000	c138,402,040	1,421,000	7,306,160						
Cotton (bales)	411,637,000	1,047,330,000	11,192,000	649,136,000	†445,000	398,194,000						
Tobacco (lbs.)	1,145,530,000	127,153,830	1,060,587,000	96,513,417	†84,943,000	30,640,413						
Flaxseed (bu.)	15,30,000	35,90,9,100	13,845,000	22,553,505	†1,455,000	13,355,595						
Rice (bu.)	b33,160,000	30,042,960	28,947,000	26,225,982	†4,213,000	3,816,978						
Peaches (bu.)	36,911,000	c41,377,231	63,460,000	c54,067,920	26,549,000	*12,690,689						
Pears (bu.)	10,377,000	c10,055,313	11,216,000	c9,275,632	839,000	779,681						
Apples (bbis.)	67,695,000	c176,07,000	76,670,000	c161,007,000	8,975,000	15,000,000						
Sugar Beets (tons)	7,416,000	45,756,720	6,511,000	36,917,370	†95,000	8,839,350						
Kafirs (bu.)	61,024,000	48,819,200	114,460,000	57,230,000	53,436,000	*8,410,800						
Total.....			\$7,099,338,031						\$5,983,306,817			\$1,116,031,214

(\*) Decrease.

(†) Increase.

(a) Forecast September 25.

(b) Forecast October 1.

(c) Value October 15.

Government on November 1, 1915, are given in the table herewith.

The final figures issued by the Government as to the value of the crop of 1915 were lower than the estimates made by the Government on November 1, 1915; but as the final figures for this year are not yet available, it is proper to compare the estimated figures of the crops of the two years on the estimates made by the Government November 1 for each year. This shows an estimated value for 1916, based on November 1 prices of the crops specified in the table, of an aggregate of \$7,099,338,031, as compared with the estimated value of November 1, 1915, of the crops of that year of \$5,983,306,817. Thus, while these crops have decreased enormously in quantity, they have at the same time increased enormously in price. The farm value of these crops based on November 1 estimates would show a gain of \$1,116,031,214 over the value of the same crops on November 1 last year. We thus have an increase in value, due to a decrease in quantity and to an enlarged home and foreign demand, so significant in extent as to give an intimation of what would happen if we should unfortunately have small crops next year.

The figures given in the table do not, of course, include the value of all crops. For instance, cotton seed, which will represent a value of \$200,000,000 or more this year, is not included. The comparison is given only on specified crops and is compiled from the most recent bulletin issued by the United States Department of Agriculture, to emphasize the situation as to our food supply and to press home upon the country the importance of putting in the largest possible acreage that can be cultivated for next year.

The total value of all farm products, including livestock, for 1916 will probably reach the stupendous total of \$12,000,000,000, due to the heavy advance in price of crops and livestock.

These figures as to the enormous increase

in the value of farm products are the official figures of the Department of Agriculture, based on the prices that were being paid to the farmers on November 1. The farmers, therefore, are getting these great profits, and the advance in the cost of foodstuffs is due to short crops and the enormous demand from at home and abroad, and not to the manipulations of the middle man.

### AMERICAN MINING CONGRESS URGED TO HOLD NEXT CONVENTION SOUTH.

Carrying out its policy of endeavoring to get organizations to hold their meetings in the South whenever possible, the MANUFACTURERS RECORD wired as follows to the American Mining Congress, now in 19th Annual Convention at Chicago, and followed this with telegrams to a number of prominent members of the Congress urging their co-operation in the effort to have the next convention of the American Mining Congress held at some point in the South:

Baltimore, Md., Nov. 14, 1916.

J. F. Callbreath,  
Secretary American Mining Congress,

Hotel La Salle, Chicago, Ill.

The MANUFACTURERS RECORD would strongly urge that the American Mining Congress hold its next meeting in the South, which is the richest undeveloped mineral region of the United States. The ablest experts in the country testify as to the vast potentialities of the South for mining and kindred operations. As yet these resources are only in the infancy of development as compared with what the future will show.

Nowhere else in the United States could the members of the American Mining Congress find more of interest and of value in their work than in the South. If the Congress will agree to hold its next meeting at some central Southern point it will have a great effect in concentrating the attention of the nation to the vast mineral resources of this section, the development of which would add enormously to national wealth and open limitless opportunities for mining engineers and all others connected with the development of the industrial potentialities of the South. Such a meeting would be certain to arouse a widespread interest in the South and largely increase your Southern membership.

In behalf of this section and not speaking for any particular city, I would press upon the attention of the Mining Congress the desirability from individual and from the national standpoint of holding your next meeting in the South.

RICHARD H. EDMONDS,  
Editor MANUFACTURERS RECORD.

## THE HONOR OF THE ARMY AT STAKE IN ITS TREATMENT OF THE NATIONAL GUARD.

A DISPATCH from Washington some days ago stated that Secretary Baker and the War Department had been very much disturbed by the fact that a large number of National Guardsmen had refused to sign the six-year oath for Federal service, and that by reason of this these men who, according to this dispatch numbered 40,000, would be permitted to retire from the National Guard organization.

The officials of the War Department say that this dispatch greatly distorts the case, and that no such number as 40,000 guardsmen have refused to take the Federal oath. The Department has set a time limit of November 30 for the taking of the oath by National Guardsmen, which applies, so they say, merely to those organizations which have not yet been called into active service along the Mexican border. Those who have refused to take this oath are to be at liberty to retain this attitude and be discharged from the service. On inquiry as to whether the men who under "moral compulsion" were tricked by the Government into signing this six-year term in the Federal service were to be given the opportunity of resigning, the War Department officials fall back upon their former attitude, to the effect that here was no moral compulsion, and claim that those who took the Federal oath must remain in the National Guard until their enlistment expires.

For the honor of the American Army we trust that this will not be the final official decision of the War Department. The American people believed that the officers of our army have a keen sense of honor, and that the War Department was managed in matters of this kind by men who recognized what honor demanded of individuals and of the nation. It is absolute folly for any Government or army officials to take the position that a large majority of the men who were tricked into taking the oath of six-years' service were not practically forced to do so under compulsion, or be run out of their encampments branded as cowards. This was the situation under which the men, called to their encampments, or to their armories, without the opportunity to consult friends or relatives or business associates, or even to debate the matter among themselves, were required to sign an oath requiring six-year service with which they had been entirely unfamiliar.

From the moment this was done the MANUFACTURERS RECORD took the ground that a trick so dishonorable would inevitably lessen patriotism, make the men in the service anxious to get out and keep other men from enlisting. The result is exactly as we predicted. It required no special knowledge of human nature to know that this would be the inevitable outcome. Wherever trickery and chicanery such as the trick played upon the National Guardsmen are to be found, there human nature naturally rebels, and the people of this country have rebelled against that situation to a point that the Government now admits that it is practically impossible to secure any new enlistments in the National Guardsmen or in the Regular Army.

Any business organization guilty of such a piece of business would have been discredited for all time to come in every business circle in the country; and yet the National Government, which ought to set the standard of honor, has been guilty of an act which reflects upon the honor of the men responsible for it, reflects upon the honor of the Army, and which immediately had an effect which any tyro at all familiar with human nature would have known would be the outcome.

There is only one possible way in which this condition can be met. The Government is now permitting men who refused to sign this oath to retire from the National Guard. It must give to the men who signed the oath under moral compulsion and without opportunity to study the matter the right to resign, or else it will stamp upon this act an infamy which cannot possibly be wiped out. The men who patriotically accepted the country's call and signed this compulsory six-year term should at least be treated as fairly and as honorably as the men who,

having had time to study the matter, have positively refused to sign this oath.

Unless the War Department is willing to take this, the only honorable position, even though in doing so it has to admit its own blunder, there will grow up throughout the country a determination not under any circumstances, except by military compulsion, to join either the National Guard or the Federal Army. Honesty is the best policy in this case, and honesty and honor alike are at stake until the Government takes this position.

## HEAVY IMPORTATIONS OF SUGAR AND OTHER TROPICAL PRODUCTS.

THE United States Department of Commerce, in a statement issued in regard to the sugar industry, shows that the exports of refined sugar for the first nine months of 1916 aggregated 1,388,650,984 pounds, which was three and a half times as much as we exported in 1914, and twenty-six times as much as in 1913.

This tremendous increase in our exports of sugar, which for the first eight months of this year amounted in value to \$71,303,966, against \$2,594,648 for the corresponding period of 1914, was wholly due to the phenomenal conditions brought about by Europe's war. By reason of the war we have enormously increased our importations of raw sugar, and Europe has looked to us for much of the refined products. During the fiscal year 1916, as shown by the bulletin issued by the Department of Commerce, the value of our imports of sugar amounted to \$314,000,000, an increase of \$57,000,000 over 1915 and of \$156,000,000 over 1914.

It is a pity from every point of view that this great increase in the demand for sugar could not have been supplied by the growers of this country in order that we might become practically independent in the sugar industry, which is as essential in war as in peace. A considerable proportion of this heavy advance in value is, of course, due to the rise in price. Had it not been for the tariff blow at the sugar industry of the South, which very nearly destroyed the Louisiana industry, the sugar producers of that section, instead of having had to start all over again after the administration came to realize that a mistake had been made and changed the tariff, would have been able to largely increase their output commensurate to some extent with the increased demand and this country would have been able to keep at home much of the vast amount that it has been sending abroad for sugar.

The Department of Commerce in its report on sugar and other tropical products issued under the head of "Our Increasing Dependence on the Tropics," shows that during the fiscal year of 1916 more than a billion dollars' worth of tropical products were brought into this country, the exact figures being \$1,060,850,416; and of this nearly one-third, \$314,000,000, was for sugar. Our imports of tropical products has shown an astonishing increase of late years, as indicated by the following figures:

Fiscal year.	Value of imports of tropical products.
1916.....	\$1,060,850,416
1915.....	807,642,182
1905.....	505,511,552
1895.....	303,476,706

Next in extent of value to sugar in tropical imports was India rubber, etc., valued at \$159,000,000, as compared with \$86,000,000 for the preceding year.

The imports of raw silk amounted in the fiscal year 1916 to \$124,000,000, which was an increase of 50 per cent. over 1915. The value of the raw cotton imported, mainly of course Egyptian cotton, was \$40,000,000, an increase of about 70 per cent. over the preceding year. Of fibers other than flax we imported \$56,000,000 worth, which was a gain of 50 per cent. Of fruits and nuts \$55,000,000, a slight increase over the preceding year, while tobacco and the manufactures thereof are given as \$38,000,000, showing a decrease of about \$2,750,000; and cocoons and chocolate amount in imports in value to \$36,000,000, a gain of 50 per cent. over 1915.

Other important items in this group are vegetable oils, \$34,000,000, against \$25,000,000 in 1915; tea, \$21,000,000, compared with \$18,000,000 last year;

gums, \$15,000,000, against \$12,000,000 in 1915; dye woods and extracts, \$10,000,000, against \$5,000,000 in 1915; spices, \$9,000,000, against \$6,000,000 in 1915; indigo, \$8,000,000, against \$1,600,000 in the preceding year; rice, \$6,200,000, against \$6,400,000 in 1915; and cabinet woods, \$4,000,000, against \$4,300,000 in 1915. Feathers, ivory, sago and tapioca, vanilla beans, licorice root, opium, quinine-bearing barks, and sponges, in sums varying from about \$3,000,000 down to less than \$1,000,000 each, complete the list of the more important tropical and subtropical products imported.

The following shows the remarkable growth in the quantity of specified tropical products imported into the United States from foreign countries and its tropical islands, Porto Rico and Hawaii:

Articles.	1905.	1915.	1916.
Sugar .....	4,517	7,238	7,618
Coffee .....	1,051	1,126	1,204
Fibers .....	625	788	1,066
Rubber, etc. ....	*68	196	204
Rice .....	109	280	288
Cotton .....	85	196	232
Cocoa .....	74	192	248
Tea .....	103	97	110
Spices .....	53	60	63
Tobacco, leaf .....	35	53	55
Silk, raw.....	22	31	41

\*Includes rubber and gutta-percha only for 1905.

While it may not be possible for this country to make itself independent of other countries for coffee, it should not have to look to other countries for sugar or rice or cotton. The South could produce sufficient rice to meet all domestic requirements and still have an abundance for export, and yet last year we imported 268,000,000 pounds of rice. We could produce all of the fine grade of Sea Island cotton needed to meet the requirements of the mills using Egyptian cotton, but last year we imported 233,000,000 pounds of cotton valued at \$40,000,000.

It should be possible for this country to be absolutely independent of all other countries for the production of sugar. Louisiana, Texas and Florida have great potentialities for cane-sugar production, while other States can produce beet sugar to advantage. The development of this industry at home to an extent sufficient to meet our own needs would keep at home a large part of the \$314,000,000 we are now spending abroad for sugar, and would create great prosperity in sections available for sugar. President Wilson and the Democratic party, seeing the blunder that had been made in putting sugar on the free list, wisely restored the duty, and thus gave a chance for the revival of this industry in which Louisiana has over \$100,000,000 invested. With adequate protection assured, this would soon double and put Louisiana to the front as one of the world's great sugar producers, and Florida and Texas could also become heavy sugar producers.

## SOME SIMMONS SECRETS OF SUCCESS.

EDWARD C. SIMMONS, the hardware king of St. Louis, started as an errand boy in a hardware store in St. Louis in 1855. Now the house of Simmons sells goods all over this world—sells three axes, two pocket-knives and several saws every minute of the year—and through his efforts St. Louis has become the greatest hardware center on the globe, doing more business, it is declared, than New York, Chicago, Philadelphia and Boston combined. Here are some of the principles which have guided Mr. Simmons to success:

Character is the decisive force in business.

Promptness is the essence of all good business.

The difference between failure and success is in doing things nearly right and doing it exactly right.

Concentration means strength. Scatteration means weakness. Having chosen one line of work or business, stick to it.

Spend fifteen minutes every night recounting your day's doing and planning to do better next morning.

Always put yourself in your customer's place.

A jobber's first duty is to help his customers prosper.

I am a great believer in the business philosophy of encouragement.

Settle claims promptly. The merchant who does not permit himself to be imposed upon occasionally will never get far.

If any of your men, or any customer, gets into a hole, always leave him a loophole to get out easy.

Quality of goods, confidence in your business and in yourself, ability and readiness to anticipate conditions and to adapt yourself to them—these are some of the essentials to business success.

## TWO BILLION FOR COTTON AND COTTON PRODUCTS AND GREAT INDUSTRIAL ACTIVITY SOUTH.

**W**ITH the cotton crop worth, including the surplus brought over from last year, not less than \$1,500,000,000, to which might be added \$400,000 or \$500,000,000 more as the aggregate value of cotton and cottonseed products turned out of Southern mills, giving to this section a direct income from cotton and cotton products of \$2,000,000 or more during the next twelve months, an amazing change in business conditions from those of the last two years is inevitable. Already we see the indications of it.

In addition to this phenomenal price for cotton and cotton goods, the great activity in iron and steel which has been prevailing throughout the North and West during the last eighteen months is rapidly spreading to the South, and coal and coke, and iron and steel in this section are sharing in this unprecedented prosperity.

There are a few industrial interests in the South which have not yet felt the effect of this new condition, but the volume of money which will come into the South this year for its agricultural and manufactured products will far and away exceed anything which this section has ever known. The increasing demand at advancing wages for labor means that the laboring man will have more money to spend, as will the farmers and the manufacturers. For nearly two years after the war began the South suffered serious depression, largely by reason of the war, at a time when the war demand for iron and steel and munitions in the East and West had brought to those sections the greatest prosperity which they had ever known.

This situation as to the East and the West was voiced some days ago by a Western iron man who said that during the last twelve months his profits had been so large that with one year more of similar prosperity he would not care what might happen or who might be President. He was looking at the matter entirely from the material point of view, and felt that with one year more of the present conditions he would have accumulated wealth enough to make him unconcerned as to what might take place.

It is possible that the influx of money into the South may bring about a somewhat similar feeling on the part of many people who may be more concerned in the great profits to be made during this period of war-munition prosperity than in the wise use of these profits.

When a section rushes, as the South is now doing, from a period of long depression into one of abounding activity and of wealth creation, it is in danger of becoming wildly extravagant, of indulging in reckless speculation, and of becoming the center for promoters of "wild-cat" stock schemes of all kinds. If, on the contrary, the South wisely utilizes this wealth and conserves it for legitimate uses, for the paying off of financial obligations by the farmer and the merchant and the manufacturer, and for accumulating a surplus for the lean years which sooner or later will be sure to follow, it will build a solid foundation on which to rear its structure of permanent wealth. Out of this situation the South should be able to put itself in an impregnably strong financial position. Its farmers and merchants should be able to lay aside money sufficient to carry an entire cotton crop through a whole year without having to call upon bankers for financial assistance should the exigencies of war bring about a period when for a time cotton would be as unsalable as it was in 1914. This is a condition in which

Western farmers and merchants have to a large extent placed themselves. The West could finance itself if for a year its wheat crop was without a market. The South should place itself in a similar position as to cotton.

We are living in an epoch unlike any in human history.

The man who does not recognize that the conditions surrounding business are unparalleled, that they are due to Europe's war and may change over night whenever the war ends, would be foolish indeed. We see no sign of the war's ending within the next year or two. It is more likely, we think, to run several years longer than to end within the next twelve months. But it is impossible for human foresight to forecast what is ahead of the world as to Europe's war, or what is ahead of this country. Prudence and common sense demand that men everywhere while making the most of present opportunities should act with caution and keep themselves in a financial condition to meet any changes that may come about with the end of the war. The South, of all sections, should take the lead in doing this, because it lacks accumulated capital such as the East and West have.

**I**n the meantime, however, the high price of cotton and the prosperity in other interests will create great industrial activity in the South. The railroads will be forced by the pressure of business to largely increase their facilities, new iron and steel enterprises will inevitably be started, a wider range of mineral properties will be developed, and everywhere there will be unwonted stir and activity.

### SEMET-SOLVAY EXPANSION IN THE SOUTH AND ITS IMPORTANCE.

**R**UMOR of projected large new activities in Alabama on the part of the Semet-Solvay Company, following big operations in Kentucky, West Virginia and Illinois, have been persistent for more than a month. It was known that the company held an option from The Alabama Company upon 7000 acres of coal land in Tuscaloosa county, and that the land was being drilled and examined by the Semet-Solvay engineers. The option was exercised by the purchase of the land for about a half million dollars. The coal proved in the examination of the property is said to be more than 20,000,000 tons of as good coking quality as any in the State.

While the examination of the coal field was in progress the Semet-Solvay Company was also drilling on a 2500-acre tract of iron land in Shades Valley, where the Clinton iron-ore bed would, in accordance with the relation of its dip to the topography at that point, be found at a depth of about 1500 feet. On the one hand, this is a frank recognition of the fact that deep ore mining at Birmingham must be accepted as a factor in future production, and must be intelligently planned; and, on the other hand, it shows that the acquisition of the Tuscaloosa coal lands by the Semet-Solvay Company was not merely to protect the future requirements of its normal industry, but involved expansion along new lines. It indicated that the various chemical activities of this company necessitated larger quantities of ammonia, benzol and other by-products, and that to obtain these substances new links in the industrial chain had to be forged.

The interdependence of enterprises so dissimilar in character as to possess no immediately apparent connection is brought out in a striking manner in the present instance. It might seem like a far-fetched relationship to explain the existence of a dairy in New York partly through the coking of coal in Alabama, yet the connection is a real one, as will presently appear, with a group of mammoth industries lying between. The need of larger supplies of ammonia and benzol involves surplus coke and surplus gas. The coke calls for more iron to smelt; the gas, in the case of a district already

abundantly supplied with that commodity, demands a steel plant. Here is found the explanation of the simultaneous exploration of coal and iron lands in the Birmingham region by the Semet-Solvay Company.

Hanging upon this is also the reasonableness of some kind of consolidation of the interests of The Alabama Company with the Semet-Solvay. The former concern found the problem of existence as a simple producer of pig iron fraught with serious financial difficulties during the period of low prices before the European war. The weakness of its position was fully recognized by its board of directors, but the problem of financing an expansion of the enterprise was not easy, particularly at a time when the potential output of steel from existing plants was in excess of market requirements. The present is a more favorable moment, with an optimistic sentiment in the steel trade which no rumors of an early peace in Europe can disturb. Expansion has for some time been freely discussed in the councils of The Alabama Company. The evident friendly relationship between it and the Semet-Solvay lends color to the belief that the Alabama properties will enter into the general scheme involved in the rumored expansion of the operations of the Semet-Solvay Company.

The original purpose of the Semet-Solvay Company, organized in 1895 as a subsidiary of the Solvay Process Company, was to furnish the parent corporation with the ammonia needed in the manufacture of soda. For many years the disposal of the coke, gas and other substances obtained in the process of by-product coking deterred the expansion of its operations. Ironmasters were skeptical in regard to the use of by-product coke in blast furnaces.

The development of diversified chemical manufacture by the Semet-Solvay Company was a matter of relatively slow growth, but with the outbreak of the European war this side of its business made a sudden leap. It was in a position to manufacture picrates and tri-nitrotoluol on a large scale. The magnitude of its operations may be gauged by the fact that its stock, on a \$10,000,000 capitalization divided into \$100 shares, is now quoted in the open market at about \$325. In 1915 it took over the Federal Furnace Co., increasing its capital stock from \$5,000,000 at that time, and early in 1916 it absorbed the Iroquois Iron Co. The fact that it has thus definitely embarked upon steel manufacture in the North and West lessens any surprise that might be felt should this concern establish into a similar enterprise at Birmingham.

It was recently announced that the Semet-Solvay was preparing to develop the aniline-dye industry in America on a scale equal to that of the Germans, and its establishment of the largest and best-equipped research laboratory in America indicates its purpose to develop collateral chemical industries of many sorts, founded primarily upon the by-products from coking plants which it will thus be enabled to utilize. Not long since, in response to a request from the Bureau of Mines at Washington for a contribution to assist in the study of utilizing by-products from coke ovens, the Semet-Solvay appropriated, in addition to its private research work, the sum of \$100,000, to be expended in connection with the investigations of that bureau, and assigned members of its own technical staff to guide the contemplated studies.

By reason of these activities the Semet-Solvay has taken rank as one of the greatest enterprises in America, and few concerns possess so wide a range of interests, each linked to the others as a necessary part of a continuous chain. The subsidiary, which was created to supply some needed ammonia, has grown to proportions equal to the Solvay Process Co. that created it, and predictions are many that it is destined to overshadow the parent.

This group of related industries is the outgrowth of a combination of conditions that favored the manufacture of soda at Syracuse, N. Y. Near the old "salt lick" upon which was founded a salt industry of national fame in the early days of the United States were enormous beds of pure limestone. With cheap coal available in Pennsylvania, a short distance south, and cheap transportation insured by the competition of the Erie Canal, the ammonia-soda process of the great Belgian chemist,

Solvay, was there developed on what was originally a modest scale. Its success was immediate, and as a consequence the price of soda, which was formerly above five cents per pound, is available at New York in normal times at about three-quarters of a cent per pound. The relation of the dairy to the long chain of industries consists in the acquisition of large areas of land on which salt wells might be sunk. The utilization of this valuable farm land involved the development of a herd of cattle and the establishment of a model creamery, which would not exist but for the need of ammonia from the smoking ovens in Alabama, Pennsylvania and Kentucky.

Although the officials of the Semet-Solvay Company are reticent as to their plans, the evidence clearly points to a large development by it in Alabama, where it already has a large by-product coke plant in operation at Ensley. The entrance of this company on a large scale into the Alabama district will be an event of great importance to the metallurgical and chemical industries of the whole South.

#### HOW SOME PEOPLE MISREAD THE MANUFACTURERS RECORD ON PUBLIC QUESTIONS.

THE SMITHERMAN COTTON MILLS.

S. J. Smitherman, Pres't. A. W. E. Capel, Secy. & Treas.  
Troy, N. C., November 4, 1916.

Editor Manufacturers Record:

Check \$4 pays subscription. Your paper is valuable and I enjoy it all, except your politics. You boom the South as a great country for everything except it cannot produce great men. The South is big enough for everybody, but everybody is not big enough for the South. The South has been sitting at the "head of the table" lately, and some helpful legislation has been enacted.

The writer does not remember to have read anything but criticism in yours of Mr. Wilson's administration. And Mr. Daniels has been a laughing-stock in your estimation. Stop praising the South and take a little time off to praise some of our great Southern men. It is needless to suggest their names, but will mention at least two North Carolinians—F. M. Simmons and Claude Kitchin. I notice another one of your subscribers of the State "ripped you up the back" some time ago, and I said "Amen" to his speech.

I trust your next issue will have to declare Woodrow Wilson as our next President to again administer the affairs of this country four more years. The administrative body has been too Southern to suit some sections of the country, it is very evident.

A. W. E. CAPEL.

The foregoing letter from Mr. Capel was evidently written under the impression that he was stating the facts, and that he was correct in his charges against the MANUFACTURERS RECORD as to things which it had or had not done. Now, as a matter of fact, the MANUFACTURERS RECORD has no politics. It is absolutely non-partisan, and discusses public questions from the standpoint of economics alone.

We cannot understand how any man could have read the MANUFACTURERS RECORD and gained the impression that it has not believed that the South could produce big men. The one thing for which the MANUFACTURERS RECORD has persistently stood for 33 years is the ability of the business men of the South and their great power of leadership. Some of the public men of this section have measured high up with its ablest business men; but that there has been entirely too much small politics here and there in the South for the best interests of this section we believe all thoughtful men in the South will admit.

The MANUFACTURERS RECORD has advocated protection as opposed to free trade, believing in protection as a necessity for the welfare of the South. It has not varied on that position for the last 34 years. It has commended or condemned, according as they might act on economic questions, friends and enemies, without regard to which were friends and which were enemies.

As illustrating how far away from the facts Mr. Capel is, is his statement: "and Mr. Daniels has been a laughing-stock in your estimation." If Mr. Capel will point out a single case in which the MANUFACTURERS RECORD has undertaken to make Mr. Daniels a laughing-stock, we shall appreciate it. Mr. Daniels does not think so, for he and the editor of the MANUFACTURERS RECORD have been warm, close friends for many years. He is a free-trader;

the writer is a protectionist. They are equally frank in advocating what they believe to be right; and they are equally frank in not permitting economic discussions to change in the slightest their friendly feelings.

When Mr. Daniels suggested the building of an armor-plate plant by the Government, the MANUFACTURERS RECORD vigorously upheld the proposition, even though in doing so it had to bitterly antagonize personal friends interested in other armor-plate and steel-making enterprises. Unceasingly the MANUFACTURERS RECORD fought the efforts of the Bethlehem Steel Co. to prevent the building of an armor-plate plant by the Government, though in doing so it had to antagonize thus vigorously personal friends interested in the management of that company. It had no more hesitation in vigorously assailing their position when they were fighting against an armor-plate plant than it had in attacking any free-trade theory advanced by other warm personal friends. The MANUFACTURERS RECORD led the fight in the country, and we believe was the only industrial paper in the United States that upheld the bill for a Government-owned armor-plate plant. We were in constant touch with Secretary Daniels, Senator Tillman and others who were making the fight, and keeping them fully advised as to every possible argument in favor of an armor-plate plant; and yet Mr. Capel suggests that "Mr. Daniels has been a laughing-stock in your estimation!"

The rest of Mr. Capel's criticisms are just about as far from the facts in the case as is this statement about Mr. Daniels. It hardly seems necessary at this late date to suggest that no individual in the world would more heartily rejoice in seeing Southern men and the South lead the nation in wise legislation as well as in industrial and material development generally than would the editor of the MANUFACTURERS RECORD. No one can have intelligently read the MANUFACTURERS RECORD without realizing this fact. Nevertheless, it becomes necessary sometimes to criticize even the best of friends when in politics, and to commend those for whom no particular friendship is felt when they are advocating policies believed by the MANUFACTURERS RECORD to be essential to the South's welfare. For instance, President Wilson is now an enthusiastic advocate of Preparedness; but long after the war began he was saying that Preparedness was unnecessary, and that the agitation for Preparedness was unwise. At that time the MANUFACTURERS RECORD was insisting that Preparedness was necessary. It was then going directly contrary, but in the friendliest spirit, to the position taken by President Wilson. Now, however, President Wilson fully agrees in the position that the MANUFACTURERS RECORD took from the start of the European war on that point, and is as ardent an advocate of Preparedness as is the MANUFACTURERS RECORD.

When Mr. Daniels was nominated as Secretary of the Navy Department, the editor of the MANUFACTURERS RECORD wired his congratulations, and in the spirit that then prevailed, expressed the hope that the day would soon come when navies would no longer be needed. At that time, before the horrors of Europe's war had changed all world conditions, the MANUFACTURERS RECORD believed that great armies and navies were unnecessary; but within a few weeks after Belgium had been overrun it was clearly seen that we had entered a new epoch in world affairs, in which we must unlearn the lessons of the past and learn the lesson that the present was teaching with such tremendous emphasis. In the fight for Preparedness we were, therefore, a year or more ahead of President Wilson; but now he is in the heartiest sympathy with the MANUFACTURERS RECORD's fight for Preparedness.

When the present administration went into power, sugar was put on the free list. The MANUFACTURERS RECORD vigorously antagonized the movement as unwise and destined to result in the almost complete destruction of the sugar interests of Louisiana. This was the effect, and millions of dollars were lost in that state, and this splendid industry, in which over \$100,000,000 of capital was invested, was fast being closed out in bankrupt courts. Sugar should never have been put on the

free list, and even when the bill was passed many Democrats were not in favor of it; and the party had to reverse itself on that question and restore the duty on sugar because it saw that it needed the revenue of \$50,000,000 a year which had been collected on sugar, and which was one of the best sources of revenue the Government had.

Was the MANUFACTURERS RECORD right in demanding Preparedness long before President Wilson saw the need of it, but which he now sees? Was it right in opposing free trade on sugar long before the Democratic party was willing to recognize that the tariff should remain on sugar? It merely happens that, absolutely untrammeled by political ties, and yet being of the South and by the South and for the South, the MANUFACTURERS RECORD seeks only what it believes to be for the highest good of this section. It, therefore, expresses its opinion on public questions, and as in the case of Preparedness and the sugar tariff, it has lived to see those who at times criticized it and denounced it come to recognize the wisdom of its course and adopt its teachings. It will not be long, either, before the country will see what a mistake was made in yielding to the bludgeon of the railroad trainmen and it will soon realize that the position of the MANUFACTURERS RECORD on that question is fully sustained.

#### KEEP THE PINK BOLL-WORM FROM INVASING THE UNITED STATES!

THERE is ample warrant for the alarm expressed by the United States Department of Agriculture over the fact that the discovery of the pink boll-weevil in Mexico has been authenticated. In a report by the Department of Agriculture it is stated that a planter in central northern Mexico, about 200 miles from the Texas-Mexican border, sent to the Federal Horticultural Board some cotton bolls from his plantation, which he thought to be infested with the common boll-weevil. An examination demonstrated that the insect was the dreaded pink boll-worm of India and Egypt.

The pink boll-worm is declared to be the most destructive of all cotton pests, and has cost millions of dollars of loss to the cotton crop of India, Egypt and other cotton-producing countries. Heretofore it has been unknown to North American cotton-growing sections, and quarantine regulations against the shipment of foreign cotton have been in force for some time to prevent the importation of the pest. It is assumed that the pink boll-worm was introduced into Mexico by some planter of the Laguna district, one of the most important cotton-producing areas in Mexico, through efforts to get improved cotton varieties from Egypt or other foreign sources.

A rigid quarantine against any further movement of lint cotton, seed cotton or cottonseed hulls between Mexico and the United States is imperative, as the presence of the pink boll-weevil in Mexico constitutes one of the greatest menaces which has confronted American cotton culture in its history. In capacity for damage, the pink boll-weevil is said to far exceed the boll-weevil.

It is a matter of history that the boll-weevil was introduced from Mexico and that it was permitted to get a start in this country through failure to appreciate the magnitude of the menace on its approach to the Mexico-Texas border. The State legislature of Texas was appealed to for funds to fight the pest. Unfamiliar with the capacity of the insect for destruction, the legislators declined to finance the fight against the pest and it was not until Texas was over-run by the boll-weevil that the country woke up to the appalling loss with which the cotton producing sections of the South were confronted.

Slowly the boll-weevil has made its way across the cotton belt until this year it is invading the South Atlantic states. Its march from the Rio Grande to the sea will soon have been entirely completed, leaving in its wake untold millions of destruction.

The cotton industry of the South cannot afford to have a similar or worse experience with the pink boll-worm, and being forewarned, there should be no failure to adopt every possible means to prevent the entrance of the pest into American territory.

## Relief of Serious Car Shortage Promised in Action of Railroad Heads

**INTIMATION BY COMMISSIONER M'CHORD THAT EMERGENCY ORDER MAY BE ISSUED UNLESS RAILROADS FIND EARLY SOLUTION OF PROBLEM IS FOLLOWED BY ASSURANCES THAT MOVE TO RETURN CARS TO OWNING LINES IS UNDER WAY.**

[Special Dispatch to Manufacturers Record.]

Louisville, Ky., November 14.

Two orders, with the authority of the Interstate Commerce Commission behind them, have resulted from uncovering, by the commission's inquiry at Louisville, of startling car-shortage conditions, with Southern roads chief sufferers.

The first calls on all railroads, wherever situated, to return excess coal-carrying equipment to the owner roads, loaded or empty, until the roads holding the cars in question reach a 100 per cent. basis. It is expected that this order will be supplemented so as to relieve under-equipped roads whose cars, in turn, are being held by other roads operating on short shifts.

The second order that no railroad shall use refrigerator cars for purposes other than to transport perishable commodities. This will place such equipment at the disposal of fruit, produce and foodstuff shippers and tend to restore such equipment to lines which sorely need it.

Commissioner Charles C. McChord on Tuesday instructed representatives of railroads present to inform him before noon Wednesday what was being done in the way of restoring coal equipment to owner roads. B. M. Starks, general manager of the Louisville & Nashville was summoned to appear Wednesday and say when the Louisville & Nashville would lift the embargo in effect against Northern carriers, that line having already begun to receive numbers of its wrongfully held cars.

Statements made by representatives of railroads, and to be made by a committee of the American Railway Association coming from New York on Wednesday, indicate that the serious aspects of the shortage are fast being remedied and that relief is already being given roads and shippers urgently in need of relief. Co-operation appears to be general and in good faith.

Practically all the railroads of the country are now before the commission, and their representatives, shippers' organizations and the commission will give attention from now on to accumulating data from which to work out a plan for regulation of the car supply so as to hereafter prevent recurrences of such situations as have just been disclosed.

It is believed that the orders issued and the publicity given the matter will bring prompt relief in all quarters from existing acute shortages.

### EFFECTIVE WORK OF INTERSTATE COMMERCE COMMISSION.

**Action Results from Situation Developed at Inquiry at Louisville—Co-operation Secured from Representatives of Railroads and Shippers.**

[Special Correspondence Manufacturers Record.]

Louisville, Ky., November 13.

A means by which immediate relief for carriers and shippers suffering from the car shortage might be provided has been uppermost throughout the second stage of the investigation being conducted by the Interstate Commerce Commission at Louisville. Practically all of the testimony given by manufacturers and representatives of consumers in the north-central part of the country has been to the effect that the need is for immediate supplies of coal, while shippers and representatives of the Southern carriers have told moving stories of how seriously they have been affected by the disorganization of the car service rules and operations.

Probability of an order from the commission before the hearing gets much further along was voiced by Commissioner Charles C. McChord, who is presiding. The series of statements of representatives of the Northern

and Eastern roads to the effect that they were holding the cars of foreign lines because they need them and are using them and propose to keep them has on several occasions moved Mr. McChord to rather caustic comments, and late last Friday afternoon at the hearing he declared that unless the railroads very shortly found by themselves some means for restoration of an equitable balance of equipment for the Southern lines, the commission would not be unlikely to depart from its custom and issue an emergency order that would bring relief.

Assurances that they had begun the return of all coal cars held on their lines to the owning roads were received today by Commissioner McChord from practically every large railroad in the United States.

Return of such equipment was demanded by him on Saturday following representations by railroad men present at the hearings that such a measure would provide the quickest means of relieving the coal shortage from which various sections of the country have been suffering.

In addition to telegrams, which Commissioner McChord received today from the individual roads announcing their action, the co-operation of the Eastern roads in returning all coal-car equipment on their lines was promised by Charles C. Paulding, B. I. Spock and C. B. Heissner, counsel, respectively, for the New York Central, the New York, New Haven & Hartford and the Pennsylvania lines west of Pittsburgh.

Mr. Paulding, speaking for his associates, said:

"I would announce that we consider the situation a very serious one and fully recognize the necessity of prompt and effective action. I wish to state that the Eastern railways are in full accord with the order of the commission for the return of cars to the owning companies at the earliest possible moment, and we pledge the fullest measure of co-operation in carrying it out."

Much of the testimony presented during the day was but a repetition of that given by other witnesses since the hearings started. The great activity of export trade, the increased output of ore in the lake region and the irregularity of steamship arrivals were given as the principal reasons for the gravitation of railroad equipment toward Eastern lines.

All of the traffic experts who go on the stand are questioned by Attorney Examiner F. B. Dow, by the commissioner or by counsel for one or another of the parties present at the hearing, as to what means they would suggest for prevention of recurrences of similar situations. George Hodges of the Car Service Commission of the American Railways Association told of as many as 40,000 violations of the rules which inspectors had found on 107 railroads as long ago as last June, when he was testifying as to the breakdown of the service rules. The Southern Railway was most nearly free of any railroad of the 107 of the practice of piracy, he stated.

The witness was quoted as announcing that a meeting of railroad presidents would be held in New York this week, at which some solution of the problem would be sought, although if revision of the service rules was to be agreed upon at once the new rules could hardly go into effect before the first of the year. Several suggestions have been made as to pooling of cars, but most of the traffic experts agree that an increased and progressive demurrage plan, policing of consignment business and some authority charged with enforcement of the service rules is called for.

Edward De Groot, Jr., superintendent of transportation of the Chicago & Eastern Illinois Railroad, which, he stated, is short 5000 coal cars, said that many shippers order more cars than they need, and that equipment is being held under load for unusual lengths of time. He suggested that the commission issue an order upon all railroads, demanding that foreign coal cars be immediately returned to owner lines, while the box car prob-

lem, he said, could be solved if the initials on cars were disregarded and cars diverted to railroads having less than their actual equipment under control. This distribution, he believed, could be managed through a committee to be formed of railroad executives and a representative of the commission, with power to order roads to distribute their excess to other roads and bring the equipment of each back to the 100 per cent. or normal mark.

A good part of the testimony during the last half of the week was given by representatives of industries and industrial organizations of the North Central States, which are suffering sorely for want of coal. Michigan, for instance, has only a week's supply, while the Great Lakes region is short millions of tons, and if it is to be supplied deliveries must be made before the 25th of November, at which time the lake traffic will be closed for the winter.

Walter C. Cole, secretary of the Detroit Board of Commerce, who was in Louisville for the week, stated that he had obtained by telegraph the agreement of North Central carriers to return coal cars to Kentucky and Tennessee, so that the coal operators in this section would be able to make shipments to them on their contracts, which they are not able to do at this time owing to the embargoes of the Louisville & Nashville and the Chesapeake & Ohio and the Norfolk & Western.

Kentucky and Tennessee coal operators, especially those of the eastern section, represented by the Harlan, the Hazard and the Southern Appalachian Operators' associations, have been exceedingly active during the hearing and have held several meetings at Louisville. Among other things, they have petitioned the commission to order return to the Southern roads of the coal equipment being wrongfully held by roads North and East; to order up the embargo of the Louisville & Nashville and to aid the operators in their efforts to obtain more than the \$1 a ton allowance the Louisville & Nashville is making for coal it buys for its own uses.

Testimony of representatives of these operating associations is to the effect that the contracts they hold with the North Central consumers are in the way of trial orders, obtained in part due to labor troubles in Ohio mines. Unless they are able to make deliveries, the circumstance will give the Southern territory a setback that will take years of reconstructive work to overcome. The operators are not insensible of the necessity that caused the Louisville & Nashville to declare the embargo, but they want it lifted, since fully 50 per cent. of their output is booked to go north of the river.

Meanwhile Southern industrial plants served by the Louisville & Nashville, the Illinois Central, the Chesapeake & Ohio and the Norfolk & Western and connecting lines where embargoes are not in effect are profiting by the embargoes against traffic north. They are grabbing all the steam coals they can get, hoping that they will be able to get in supplies to see them at least through a part of the winter. A result is that mine-run coal in the Eastern Kentucky-East Tennessee field is selling at a higher price than the block coal for the domestic trade, which usually far tops the steam sizes.

J. P. Stevens of the Chesapeake & Ohio testified that his road is short 20,557 coal cars, and that during a part of October it was losing them at the rate of 2000 a week. The line controls more box cars than it owns, but attributes this condition to the fact that much grain for export is moving to the seaboard over its lines. At the water transfer of these loads to bottoms is slow, partly because of the activity of the submarines.

"The way out of this situation," he said, "would be for proper rules for the proper use of cars, to be enforced by a body invested with such authority."

Territorial embargoes had been placed by the Chesapeake & Ohio, he said, for the reason that such roads as the Michigan Central had announced that they proposed to exact two trips from each foreign car that came on their lines before rerouting it toward the owner line. Many of the coal cars of the Southern railroads, for instance, are being used to haul sugar beets and gravel in Michigan, Wisconsin and Illinois.

J. T. King of the Atlantic Coast Line detailed the number of its cars held by other lines, saying that his road controlled only 70.2 per cent. of its total equipment. Traffic is heavy, he agreed, but not abnormal, and the trouble is due to lack of sufficient equipment, which, in turn, is explained by failure of other lines to return cars. He advocated higher demurrage rates, and said that abolition of the average agreement would be

beneficial, relating to demurrage and per diem charges and observance of car service rules.

J. F. Porterfield of the Illinois Central, who testified again last week, said that so many of the refrigerator cars of the company were off the line that traffic officials are in a quandary as to how to handle large banana shipments due at New Orleans this week. During the testimony of the week there was much reference to misuse of refrigerator cars, witnesses from the Central East, for instance, telling of how these cars are being used for shipments of paving block, furniture and the like, while the apple crops in the fruit sections are spoiling for lack of transportation facilities.

Henry W. Taylor, general superintendent of transportation of the Southern Railway system, stated that out of 74,682 cars owned, of which 26,614 are coal cars, the Southern at this time controls the equivalent of 103 per cent. of its box cars and 75.2 per cent. of its coal cars, or 90.2 per cent. of the total. He filed detailed answers to the formal questions propounded, and Mr. Taylor will be cross-examined on these later on.

R. K. Smith of the Mississippi Central Railroad said that cars are a liability, not an asset, under present conditions, and this is especially true of small roads such as his. When cars are appropriated, he said, the owners receive no per diem, and efforts to have the cars returned are unavailing, the owner not getting returns for the money invested in this equipment. To build more cars under these conditions, he thought, would be equivalent to a waste of money.

D. E. Spangler, superintendent of transportation of the Norfolk & Western, who was complimented upon his mastery of the situation and his views on the best courses to pursue, said his company is short about 32 per cent. of its own equipment. Lack of traffic from the East to the South and West explains the condition, he thought. Western carriers are principal offenders against the Norfolk & Western, he said, while he characterized traffic as abnormally heavy, business with his road being 27 per cent. heavier than usual. Norfolk & Western cars now average 45 miles a day; if they could make 65 they would be able to take care of the situation. To relieve the situation, he said, carriers should agree to pro-rate cars with connecting lines; the commission should express approval of the suspension of reconsigning service and abolish free time, demand that all cars be filled to capacity and endorse increased demurrage. Failure promptly to embargo certain shipments and a lack of coal-storage facilities of coal-consuming concerns are factors in the shortage, he said.

Mr. Spangler was the first railroad man to answer any of the last 10 questions submitted by the commission. He detailed over a long period the daily movement of cars, saying an average daily movement of 45,80 miles during September, 1916, was the greatest on record. In October, 1914, the movement averaged but 28,81 miles.

"Do you believe the situation would be relieved if the commission promulgated as its own rules 1, 2, 3 and 4 of the American Railway Association?" asked I. Van Norman, counsel for Southern lumber and coal interests, when Mr. Spangler concluded his answers.

"No," was the reply. "It would merely transfer the situation to another section, as cars being returned from some places would necessarily be returned empty, because loads in some instances are almost all consigned in one direction."

A per diem increase would be beneficial, he believed. Under existent circumstances all coal traffic offered could be accepted, he said, provided the cars were promptly returned.

It would be permissible to load a coal car with lumber when no coal shipment was to be made in the direction a car is being routed home.

To show that the drain is constant on Norfolk & Western resources, Mr. Spangler said that on November 1 that road controlled but 68 per cent. of the equipment it owned, while on October 1 it controlled 71 per cent. He said the Norfolk & Western has enough coal cars to care for all such traffic offered were other roads to promptly return cars unloaded at their destinations.

A representative from the Michigan territory interrogated Mr. Spangler as to whether "he was willing to co-operate with other roads should the commission order relief measures for the lake section, which cannot be supplied with coal after the Great Lakes are closed to navigation on November 25."

"Certainly," was the answer, "just as any other legal order would be complied with."

A. G. T. Moore, assistant secretary of the Southern Fine Association, read a detailed statement of shipments since August, and also how many orders could not be filled because of lack of shipping equipment.

He showed that the cars received were but 41 per cent. of the number needed by the Southern pine mills, according to reports from 65 mills.

In normal times, said he, box cars alone are used, but just now the mills are glad to use any equipment, even coal cars. A great increase in the industry he represented would result, said Mr. Moore, if the car facilities were at hand. He pointed out that despite enormous increases in business during the past two years, railroads have made practically no increase in the car surpluses. Continuing, he said:

"When the carriers know they are already congested at the ports from which export trade emanates, and that it is impossible to load promptly on steamers the material already under load, they continue to accept consignments, this gradually increasing the congestion and delaying the equipment going back into its normal channels of service."

His remarks precipitated a discussion between the witness, Mr. Norman, R. W. Moore of Washington, D. C., appearing for a number of carriers, and Commissioner McChord, with the result that the commissioner suggested that in the future, or until the shortage was relieved, all carriers ascertain that shipping export facilities have been provided before accepting further consignments.

Mr. Moore said that reconsigning shipments from one point to another by lumber brokers was primarily a cause of the shortage, and said limiting reconsignments would be a relief measure. He replied in the affirmative when Attorney Northcutt of the Louisville & Nashville asked if the association he represented would favor a general national embargo against reconsigning for any definite period.

C. H. Rodhoefer of St. Louis took the stand in the interest of smaller lumber dealers and mills, and sought to disprove statements by Mr. Moore. He said the reason the milling interests were not forced to reconsign was because of large selling forces, but Mr. Moore showed that the brokers maintained selling staffs of equal number to those of the mills, with respect to proportion of business. Mr. Rodhoefer said reconsigning was not generally practiced now because of the high prices being paid for lumber.

At various times during the progress of the hearing references have been made to changes which are expected to be made in the service rules when representatives of the American Railways Association meet in New York on Thursday of this week for the purpose. It has not appeared to attorneys representing the Southern railways or the Southern shippers that this relief will meet the needs of the situation. Mr. Norman, for one, has several times urged that emergency action be taken, at one time making a statement that people in the North who are looking to the Kentucky field for coal will have frozen to death before the relief demanded is forthcoming from that source. When news was received in Louisville Saturday of the decision of Judge K. M. Landis, in the Federal Court at Chicago, in which he held that the Interstate Commerce Commission only could provide relief for the car-shortage situation, it was more and more expected that the commission would act at once.

Another important phase of the shortage was the movement of cotton in the South. The fact that the market is high and that the growers, often pressed by their bankers who have advanced money, are doing all in their power to get their crop to the market, is contributing to the distress south of the river. Some of the transportation officials of the various railroads admitted that in some instances they had discriminated in favor of cotton, which is a most important crop, and which must be moved.

### The Cotton Movement.

In his report of November 10 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 102 days of the season was 5,546,494 bales, an increase over the same period last year of 1,145,187 bales. The exports were 1,987,011 bales, an increase of 474,002 bales. The takings were, by Northern spinners, 906,352 bales, an increase of 175,434 bales; by Southern spinners, 1,161,562 bales, an increase of 214,880 bales.

### HOUSTON'S SELF-SUSTAINING FARM FOR CITY PRISONERS.

#### Successful Experiment by Texas City With Problem of Dealing With Minor Offenders.

Houston, Tex., November 10—[Special.]—What is believed to be a practical plan for the utilization of the labor of vagrants, tramps and other drifters infesting large centers has been accomplished by the city of Houston, Tex., through the establishment of a city prison farm. The idea was conceived by Mayor Ben Campbell about a year ago, and put to the test without delay. After the expiration of 10 months the city has added 100 acres to the original 200, and now intends enlarging greatly upon the original plan.

From a monetary standpoint, the Houston city farm has more than paid for itself. It also has met with the almost general approval of the prisoners themselves. Instead of being confined to the city jail, they now are placed upon the farm, given healthful employment and their accommodations are far above those provided guests by the average second-rate country hotel.

The farm is situated about five miles from the center of the city. Crops of corn, cotton, potatoes, beans, peanuts, sorghum and cabbages were grown profitably during the present year. Produce from the farm sold for nearly \$10,000, and much of the food supplied the prisoners was raised on the farm.

A feature of the city farm is the large building used as a dormitory. Rows of double-decked iron beds flank the walls, and shower baths and stationary washstands have been installed. All clothing worn by prisoners upon their entrance is taken and thoroughly fumigated in a building erected especially for this purpose, and the city furnishes them with a regulation outfit to wear until they are released.

A cannery factory operated by the female prisoners is one of the interesting adjuncts of the farm. The dairy is increasing in size, and the milk and cream is either sold or used by the prisoners. Several hundred chickens and hogs are included in the farm's property.

Expenditures made on the farm by the city of Houston are apportioned as follows:

Buildings .....	\$15,153.51
Furniture and fixtures.....	1,306.61
Tools, implements.....	1,357.28
Livestock .....	855.51
Tilling land.....	1,446.91
Telephone .....	109.39
Fencing .....	2,151.97
Rent of teams.....	304.12
Fruit trees.....	140.70
Water-works .....	716.72
Miscellaneous .....	41.21
Fertilizer .....	167.52
	\$23,765.91

Average cost of prisoners per month, \$18.60.

Cost of prisoners includes groceries, meats, feed for livestock, regular monthly expenses, including superintendents, guards, cook, matron and hired labor. It is expected that the farm will ultimately produce nearly every article of food consumed.

### To Demonstrate Possibilities of Potash from Kelp Beds.

In August, 1916, the Congress of the United States appropriated \$175,000 for the investigation of sources of potash within the United States. This appropriation was designed to make possible the continuation on a large scale of the work inaugurated and carried on by the Bureau of Soils of the United States Department of Agriculture. As a result of this work, and of the operations to date of the various commercial organizations engaged in the extraction of potash from kelp on the Pacific coast, it appeared to the officials of the Department of Agriculture that the giant kelps of the Pacific coast represented the largest and most immediately available sources of potash in the country. Accordingly the Secretary of Agriculture has authorized the construction at some point on the coast of Southern California of a plant to be designed and operated to demonstrate on a commercial scale the various processes of extracting potash and by-products from kelp. This work will be carried on by the Bureau of Soils under the personal supervision of J. W. Turrentine. The bureau proposes to proceed at once with the execution of its plans.

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# Destructive Pink Boll-Worm Discovered in Northern Mexico

**EAST INDIAN PEST, HERETOFORE UNKNOWN TO NORTH AMERICAN CON-  
TINENT, FOUND IN THE LAGUNA DISTRICT OF SOUTHERN COAHUILA—  
EFFORTS TO COMBAT NEW MENACE TO COTTON PLANT.**

The pink boll-worm, declared to be the most destructive of all cotton pests, which has caused millions of dollars' loss to cotton growers in Egypt, India and other cotton-producing countries, has for the first time been discovered on the North American continent, as just announced by the United States Department of Agriculture. The presence and probable establishment of the pest in the important cotton-growing Laguna district of the State of Coahuila, Mexico, within 200 miles of the Texas-Mexico border, has been determined by specialists in the Department of Agriculture. Amendments to quarantine regulations have been promulgated by the Secretary of Agriculture seeking to prevent the worm from entering the United States, and every possible step will be taken by the department to make the prohibition effective and to safeguard the interests of the cotton producers of the United States in other ways.

The pink boll-worm is a comparatively new cotton pest, spreading from India to Egypt about eight years ago. It has already spread to practically all cotton-producing countries in the world except the United States. Recognizing the possibility of introducing the pest into this country in cottonseed, seed cotton and cottonseed hulls, the United States has prohibited for several years the importation of these products from all cotton-producing territory except six States of Northern Mexico. For the same reason cotton lint from such countries has been admitted into the United States only at certain Northern ports and after fumigation. The new amendments to quarantine regulations, effective November 4, extend the prohibition against importing seeds, seed cotton and hulls to the previously exempted Mexican territory, with the exception of that portion of the Imperial Valley south of the Mexico-California line. This area is continuous with the Imperial Valley of California, is devoted to the culture of the same kind of cotton, and is largely settled by Americans. In view of the unity of cotton culture in the valley and the entire separation of the Mexican portions of the area from continental Mexico by the Gulf of California and wide expanses of desert country, it is not considered necessary to change the existing regulations there. The growers of this valley on both sides of the international line, however, will be warned of the danger, and it is expected naturally will refrain from any traffic, if such exists, in cotton or cottonseed and seed products from those parts of Mexico against which the quarantine has been promulgated.

As to continental Mexico, however, involving the five States of Nuevo Leon, Coahuila, Durango, Chihuahua and Tamaulipas, the discovery of the pink boll-worm in the Laguna district makes it absolutely imperative that further movement of cottonseed and hulls be stopped. This has been effected by the order issued by the Secretary of Agriculture, revoking the amendments to the cottonseed quarantine which permitted such movement of seed from these States. The control of the movement of lint cotton from these States of Northern Mexico has been effected by a revision of quarantine regulations which will necessitate the transportation by water route of Mexican cotton intended for the United States to specific northern ports of entry where disinfection and compliance with the other features of the regulations can be made.

The establishment of the pink boll-worm in Mexico presents one of the greatest menaces which has come to American cotton culture in its history. This insect in India, Egypt, Hawaii and other foreign cotton-producing countries has shown a capacity for damage exceeding that of the boll-weevil. This possibility of damage has warranted the Department of Agriculture under authority of the Plant Quarantine Act, to make the most strenuous efforts to exclude this insect from the United States. This has involved, as already noted, the regulation of the entire cotton importing business, representing a value of imports of from \$30,000,000 to \$50,000,000 annually, and the control of the utilization of foreign cottons in all of our spinning, weaving and

waste mills, and other factories utilizing such cottons in any raw state.

The Laguna district, where the insect has been discovered, represents one of the most important cotton-producing areas in Mexico. It is an elevated plateau region near San Pedro, in central northern Mexico. Cotton culture is there more intensively prosecuted than anywhere else in Mexico, and it is possible that this very interest in cotton culture has led to the introduction of the pink boll-worm through the effort to get improved cotton varieties from Egypt or other foreign sources. A planter of the Laguna district sent to the Federal Horticultural Board for determination some cotton bolls from his plantation which he supposed to be infested with the common boll-weevil. An examination of this material showed that the infesting insect is the dreaded pink boll-worm of Egypt and India.

The pink boll-worm hibernates in the larval state in the seed, and in this way is readily carried to any quarter of the world by seed exportation. The adult insect is a small moth. The worm attacks the immature cotton bolls, and, in severe cases, reduces the yield 50 per cent. In addition to this, the amount of oil obtained from the seed of infested cotton is lessened from 15 to 20 per cent.

In announcing the discovery of the pink boll-worm near American cotton-producing areas, the Department of Agriculture urges that all cotton interests give assistance to the Federal authorities in preventing any movement in violation of the new amendments of cottonseed, cottonseed hulls, seed cotton or cotton lint from Mexico into the United States.

## Ten Months of American Shipbuilding.

The Bureau of Navigation, Department of Commerce, reports 968 sailing, steam, gas and unrigged vessels of 405,894 gross tons built in the United States and officially numbered during the 10 months of calendar year 1916, as follows:

Wood.	Atlantic and Gulf.		Pacific.		Great Lakes.		Western Rivers.		Total.	
	No.	Gross.	No.	Gross.	No.	Gross.	No.	Gross.	No.	Gross.
Sailing .....	39	9,781	6	3,963	.....	.....	10	.....	45	13,684
Steam .....	21	3,055	12	5,686	9	517	10	567	52	9,815
Gas .....	192	5,534	154	8,377	26	459	87	1,526	459	15,896
Unrigged .....	180	59,717	73	8,287	31	4,161	24	878	298	73,043
Total.....	432	78,067	245	26,263	66	5,137	121	2,971	864	112,428
<i>Metal.</i>										
Sailing .....	1	562	7	48,103	1	2,320	..	.....	2	2,882
Steam .....	44	162,115	7	48,103	21	64,038	4	587	76	274,513
Gas .....	5	3,772	1	213	4	5,856	3	1,500	13	11,341
Unrigged .....	7	2,758	..	.....	4	1,608	2	24	13	4,390
Total.....	57	169,207	8	48,316	30	73,822	9	2,111	104	293,456
<i>Totals.</i>										
Sailing .....	40	10,343	6	3,933	1	2,320	..	.....	47	16,566
Steam .....	65	165,150	19	53,799	26	64,555	14	1,154	124	284,653
Gas .....	197	9,306	155	8,590	34	6,315	90	3,026	476	27,227
Unrigged .....	187	62,475	73	8,287	35	5,769	26	902	321	77,423
Grand total....	489	247,274	253	74,579	96	78,959	130	5,082	968	405,894

In addition to the above, there were built for foreigners 36 wooden vessels of 372 gross tons and 11 steel vessels of 25,418 gross tons; total, 47 vessels of 25,790 gross tons.

## Chemical Engineering Catalogue Issued.

A chemical engineering catalogue has just been published by the Chemical Catalogue Co., 1 Madison avenue, New York city, under the supervision of a committee appointed by the American Institute of Chemical Engineers, the American Chemical Society and the Society of Chemical Industry.

This catalogue was the result of a great need in the chemical industry for a complete and comprehensive catalogue covering materials, fabrics, machinery and equipment used in the various chemical industries. It is somewhat different from the usual catalogue, in that it is a collection of catalogues and other data relating to above-mentioned subjects, and is condensed and

standardized as to page size and bound in one volume for convenient and ready reference.

The catalogue is indexed and cross-indexed in such a way as to enable the inquirer to quickly locate specific information. A copy of the Chemical Engineering Catalogue will be loaned without charge for a period of one year to any chemical engineer, research chemist, industrial plant superintendent, works manager, buyer, firm or individual who has legitimate use for such a reference book.

The publishers have also established an information bureau, which will furnish any information desired regarding chemical apparatus, machinery, power equipment, chemicals and supplies.

## Important Meeting of American Mining Congress.

At the Nineteenth Annual Convention of the American Mining Congress, held in Chicago this week, November 13 to 16, an elaborate program is presented, with papers by leading specialists in their line from all portions of the country. The various departments of the convention include the Metalliferous Section, Oil and Gas Section, Coal Section and Section of Uniform Mining Legislation and Public Lands Section. The conventions appeal to all those interested in the mining industry and bring together the leading engineers, operators and others of the various branches of the mining industry from ocean to ocean.

As noted in the editorial column of the MANUFACTURERS RECORD, the Mining Congress is being urged to hold its next session in some Southern city.

## Natural Gas Discovered in the Ozarks.

Balesville, Ark., November 9—[Special]—A small flow of natural gas has been discovered in the bed of White River near this place, which has aroused a great deal of interest locally and otherwise. Companies have been organized for drilling, and several thousand acres of land in the vicinity of the discovery have been acquired by lease.

This is the first discovery of natural gas ever made in the Ozarks of North Central Arkansas or South Central Missouri. Should a gas field of importance be brought in, it would mean very considerable industrial development in this section. This is the center of the Independence and Izard county manganese field, and

the zinc field begins only a few miles north of here. High-grade glass sand, fine limestone and marble ledges outcropping in the high bluffs for 125 miles up White River, Smelters, glass manufacturing plants, etc., would be among the possibilities.

## Soy Beans for Human Food.

An Indiana firm is putting out a brand of pork and beans in which two-thirds of the beans are soy beans. A company in Michigan has this year successfully canned green soy beans.

In the way of building up a big industry on a minor product, the Bott Manufacturing Co. of Little Rock, Ark., has achieved astonishing results, according to the Board of Commerce of Little Rock. The company has just shipped a fruit cake to Manila, P. I., and previous shipments have been made to all parts of the United States, Germany, Panama, Cuba, Canada and Alaska.

## Engineering and Industrial Research at Georgia School of Technology

By PHINEHAS VARNUM STEPHENS, Consulting Engineer, New York City.

The immense value to the South of the industrial research work undertaken by the Georgia School of Technology is outlined in an article herewith by Phinehas Varnum Stephens, consulting engineer of New York city. Mr. Stephens designed the new power laboratory of the Georgia School of Technology, some illustrations of which are given in connection with the interesting article which Mr. Stephens has furnished.—Editor Manufacturers Record.

The South has awakened to the fact that in this section lies immeasurable possibilities for industrial development and engineering achievement. A recent issue of the MANUFACTURERS RECORD included a remarkable collection of articles and statements relating to the chemical potentialities of the South, and notwithstanding the fairly broad scope of these articles there are many other fields of engineering, science and industry in which lay possibilities of development which rival those of chemistry.

Out of the 35 or more special articles by eminent scientists and engineers in this memorable issue, only two pointed to the direct means by which we can achieve permanent and rapid advancement in manufacturing, engineering and the varied industries of the South. In one of these articles Dr. W. R. Whitney made this statement:

**"But always back of such experiments must be found the men, the students of things. An experimental laboratory connected with a college or university of the South is a thousand times as likely to do useful research work in cellulose, turpentine, etc., as are men who are working in other surroundings. The university laboratories of some of our Western States are highly active in mining and metallurgical problems, but they will probably not directly help the South to develop her natural resources. The young chemist who is most likely to do this is he who has watched cotton grow or failed to grow, or has played about a turpentine still or whose father owns a phosphate bed or leases a monazite deposit. FOR SUCH REASONS WE WOULD PREFER TO SEE THE SOUTH INVEST MORE EXTENSIVELY IN HER YOUNG MEN. GIVE THEM THE ENGINEERING AND SCIENTIFIC EDUCATION MORE COMMONLY GRANTED TO BOYS OF THE REST OF THE COUNTRY."**

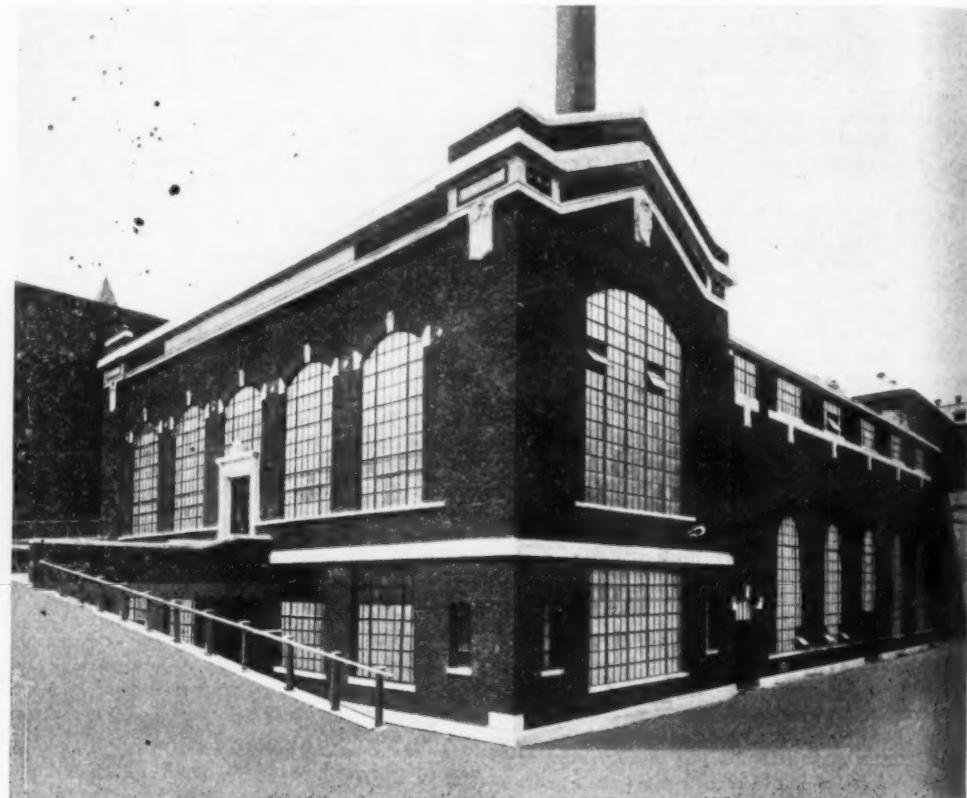
This statement strikes us with tremendous force and significance, coming as it does from one of the most eminent engineers and research experts of this country and the head of the great research laboratory of the General Electric Co.

The other article mentioned, and one of equal import-

tance to those interested in the ways and means of promoting industrial prosperity in the South, is that of Dr. Raymond F. Bacon, director of the Mellon Institute of Industrial Research of the University of Pittsburgh. Dr. Bacon outlined the wonderful progress

of what a well-organized research bureau connected with an engineering school or university can be to the community, the State and the nation. This is an example which may be well followed in every State in the South.

The first Southern State that has taken definite steps in this direction is the old Empire State of Georgia, and herewith are views of the Georgia School of Technology, in which has been established the State Engineering Research Station; the new Power Laboratory and Research Bureau, and an interior view showing the installation of the first four of the 200-horsepower Babcock & Wilcox boilers. The new power laboratory complete represents a value of over \$250,000, and will be one of the most modern in the United States. It will provide alternating and direct current for lighting, research and instruction; heat, power, refrigeration, compressed air and high-pressure fire service for the entire school and new hydraulic laboratory.



NEW POWER LABORATORY AND RESEARCH BUREAU OF GEORGIA SCHOOL OF TECHNOLOGY.

that has been made during the five years that the institute has been in existence. The writer had the pleasure of visiting this wonderful center of industrial research and hearing first hand from Dr. Bacon and his assist-

This building will be the center of engineering, research and experimental work especially relating to power and industrial problems. Other departments of research, such as chemistry, physics and municipal



BUILDINGS, CAMPUS AND ATHLETIC FIELD, GEORGIA SCHOOL OF TECHNOLOGY, ATLANTA, GA.

problems, are taken care of by those special departments for the present until a still larger building can be erected which will combine all branches of research, including pure science.

The facilities of this research station will be open to manufacturers, engineers, officials of the State and all others who may be especially interested in the industrial development of Georgia. This development has been made possible by the co-operation of many friends of the school, the alumni, the manufacturers of Georgia, and the State has already appropriated an additional sum of \$10,000 annually for the expenses of the power laboratory and to assist in the prosecution of research work.

The establishment of this engineering research station at Georgia Tech marks the beginning of a new era in the history of Georgia, and also the South, as other States are making plans to follow the example of Georgia Tech, which is now the largest and best-equipped engineering school in the South. There are 18 buildings on the campus, with several others being planned. Over 1200 engineering students are trained annually in the many branches of science, engineering, manufacturing and commerce, including architecture. It is a part of the plan of the new research bureau to provide

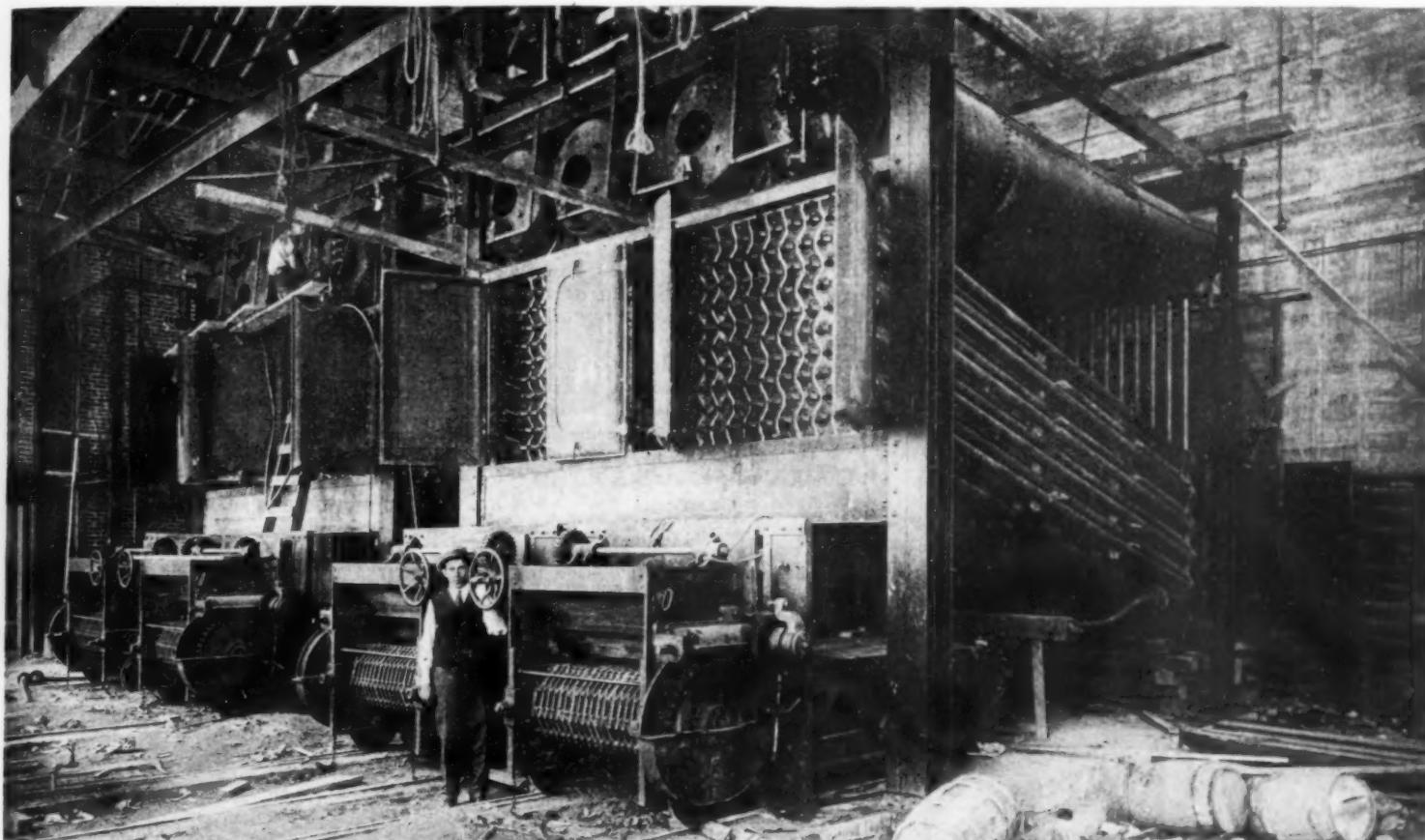
special courses in scientific investigations, for the purpose of training students to undertake the direction and control of research laboratories, enabling them to develop any natural propensities toward invention, research and original investigations. Present graduates as well as those from other institutions can take post-graduate courses leading to the degree of doctor of science.

Courses are now given leading to the degree of bachelor of science in mechanical, electrical, civil, textile and chemical engineering; also architecture and commercial engineering. Other departments, such as mining and military engineering, may be established as the need becomes evident. Graduates may receive a master degree in the above subjects by taking an extra or fifth year of work in the school, and, as above stated, the new research bureau will offer opportunities of securing still higher degrees. Such opportunities are greatly needed in the South, because at the present time over 90 per cent. of those receiving doctor degrees take their work in Northern or Western institutions.

Among the notable features of Georgia Tech in addition to the new power laboratory and research bureau is the new \$75,000 Rockefeller Y. M. C. A. Building, being the center of student life and activity, social,

fraternal, athletic and religious. The school, being a State institution, is strictly non-sectarian, but the moral standard of the school is one of the highest in the country. Georgia Tech is one of the few large State institutions in the United States where the honor system prevails in the classroom and on examinations.

It may also be noted that the textile school of Georgia Tech is one of the best, if not the best, equipped in the United States, and has played an important role in the building up of the textile industry in the South. The school possesses a new Carnegie library, with an excellent collection of general, professional and scientific literature. The school shops and laboratories are new and modern. Its athletic teams are among the leaders in the South. In other ways this school is endeavoring to do its share not only in providing the necessary engineers and scientists for the future prosperity, but also the industrial and engineering research laboratories necessary for the development of our unlimited natural resources, and Dr. K. G. Mattheson, president of Georgia Tech, one of the South's ablest educators, is in this way doing a splendid work for Georgia and the Southern States. This effort is being watched with interest throughout the United States.



INSTALLING BATTERY OF LATEST TYPE BOILERS IN THE NEW POWER LABORATORY AT THE GEORGIA SCHOOL OF TECHNOLOGY.

#### Texas Hay for Europe's Armies.

Galveston, Tex., November 11—[Special.]—One of the new industries that has developed as a result of the great war across the seas, and which has been of no inconsiderable financial benefit to hay growers of Texas, is the compressing and exporting of large quantities of forage for use by the allied armies.

The W. L. Edmundson Hay Co., which has built up a big business in this line during the last few years, has decided to remove its hay compressing press from Galveston to Newport News, Va. The main plant of this company is located at Houston, and is said to be the largest of its kind in the world. It will continue to handle the company's part of the Texas hay crop and will take over the business that has heretofore been going to the Galveston press.

It is announced that the reason for moving the press in this city to Newport News is that the company has entered into large contracts for the purchase of timothy hay in Northern and Eastern States, and in order to save water transportation or freight haul it was found expedient to compress and export the hay through

Newport News. The plant has a daily capacity of 750 tons.

The W. L. Edmundson Hay Co. bought large quantities of wild hay at points as far west as the New Mexico line last year.

#### Nearly \$10,000,000 for Construction Work at Chattanooga in 1916.

An expenditure of \$9,234,250 is called for by building operations and general construction work completed and under way in Chattanooga during 1916, in accordance with a paper read before the Chattanooga Society of Engineers by W. H. Sears of that city. Of this amount, \$4,705,000 was credited to new industries in the way of expenditures or appropriations by new corporations for investment. The largest of the new industries is the Chattanooga Steel Mill, rated as a \$3,000,000 corporation, construction work on which was recently commenced. Additions to factories already established involve an estimated expenditure of \$645,000.

Railroad improvements call for an estimated \$908,

600 investment, the largest item of which is the Nashville & Chattanooga's Alton Park extension.

An expenditure of \$806,000 is estimated for office and commercial buildings erected and in course of erection during the year. Residence and apartment-houses are credited with a \$428,000 investment.

For streets, roads and bridges \$1,200,000 is given. The largest item in this expenditure is the new Market street bridge over the Tennessee River, estimated to cost \$1,000,000.

For schools, churches and public buildings an expenditure of \$281,000 is involved.

#### Big Rosin and Turpentine Plant Completed.

Manufacturing is about to begin at the plant of the Newport Turpentine & Rosin Co. of Pensacola. This is a \$400,000 plant with a daily capacity of 125 round barrels of rosin, 25 barrels of turpentine and 10 barrels of pine oil. The buildings are of structural steel-concrete fireproof construction, and the machinery includes 2000 horse-power boilers, grinding equipment, stills, etc. W. B. Logan is manager.

## Recently Constructed Auxiliary Steam Plant of North Carolina Electrical Power Company

A recent and notable addition to the power facilities of the North Carolina Electrical Power Co. is the auxiliary steam plant illustrated and described here-with.

The North Carolina Electrical Power Co. operates in the western counties of North Carolina, furnishing power to Asheville, Canton, Weaverville, Marshall and other towns, and operates hydro-electric plants located on the French Broad and Ivy rivers.

The steam plant is designed for an ultimate installation of four 500-horse-power boilers and two 3000-kilowatt turbo units.

The plant is located on the banks of the French Broad River at the mouth of Beaverdam Creek, about 4000 feet distant from the Weaver power-house, a hydro-electric development belonging to the same company, situated six miles from Asheville. The tracks of the Southern Railway are located on the property and supply transportation.

The building is a brick and concrete structure, 120x80 feet. The windows are Fenestra steel sash, manufactured by the Detroit Steel Products Co. The roof members are steel, and the roof itself book-tile, covered with red tile. The floors are concrete. The building as a whole is permanent, modern fireproof construction, of pleasing appearance, devoid of unnecessary embellishment, but ample and substantial for its purpose.

The equipment of the boiler-room comprises three 500-horse-power Walsh & Weidner boilers of the Heine type, designed for a pressure of 200 pounds and for ultimate equipment with superheaters. One hundred degrees of superheat will be eventually employed. Each boiler is encased in steel and provided with an independent steel stack 150 feet high and 60 inches in diameter. The plant is equipped with Roney stokers. The boilers are designed to work to 200 per cent. capacity should occasion demand. The boiler-room is equipped with a Sprague electric hoist, running on an I-beam monorail, for handling coal. The hoist bucket conveys half a ton at a load, and handles the coal between the delivery trestle and the stoker hoppers. Ashes are disposed of by the Darley pneumatic system. Outside of the power-house and contiguous to both the county road and the railroad is located the ash-receiving tank, so arranged that the ashes may be delivered to either the railroad cars or to wagons for distribution upon the

roads. The boilers are equipped with soot blowers, differential draft gauges and similar accessories.

The piping throughout the plant is designed for superheated steam. The valves are of Chapman make, 8-inch and larger being provided with by-passes. The whole installation of piping has been designed in accordance with the latest requirements for high-pressure superheat service. The W. K. Mitchell Company of Philadelphia furnished and installed the high-pressure piping system complete. The Johns-Manville Company furnished and applied pipe covering of highest grade cellular asbestos.

Low-level LeBlanc condensers are installed immediately under the turbo units, which units are designed for maximum one-hour peak load output of 3000 kilowatts each. The machines are wound for 6600 volts, and connect direct to the transmission system without the interposition of transformers. The speed of the units is 3600 R. P. M. The exciters are of 20-kilowatt capacity, and are integral with the generators.

The switchboard is the conventional type of black marble panels mounted on pipe frame work and containing indicating and recording instruments necessary to the control of the plant. The high-tension switches are manually operated, and are located in the concrete bus structure, which is immediately underneath the switchboard. The bus structure is cellular concrete, with all parts and appurtenances isolated to reduce fire risk. All switchboard wiring is in conduits.

The main transmission lines to Asheville pass within a few feet of the door of the plant, and an outdoor switching structure connects the plant with the system. The switching structure is so arranged that any combination of plants or lines is readily secured.

Appreciating the necessity of ample condensing water and the difficulty usually experienced in obtaining it, especial attention has been accorded this feature. To the side of the power-house are located the hot and cold wells. The hot well wastes into the Weaver plant pond. A 16-inch pipe line extends from the cold well up Beaverdam Creek, and a concrete dam provides a pond which will normally supply water. There also extends from the cold well a 24-inch line, which runs to the Weaver plant canal intake. This line is buried deep enough to draw water from the bottom of the pond below ice and floating debris.

As has been previously stated, the plant will even-

tually have a capacity of 6000 kilowatts and comprise an installation of four boilers and two turbo units. At present one unit, three boilers and all piping is installed. When it is desired to install the second unit, it will be necessary merely to install a boiler on a foundation already provided, to install a turbo unit on a foundation already provided, and connect to piping now in place, and to install feed-water pumps and heaters and the switchboard panel.

Based on a present capacity of 4000 horse-power, the plant was built at a cost of \$35 per horse-power. To increase the plant to 8000 horse-power will reduce the cost to \$30 per horse-power, making the total cost of the plant \$240,000.

The plant was designed and supervised by the office of Charles E. Waddell, consulting engineer. It was put into its first regular service following the flood of July, 1916, and has been in continuous use since that time.

### Percentage of School Attendance by States

In spite of the fact that every State except Mississippi now has compulsory school attendance laws, the problem of how to secure a strict observance of the laws does not yet appear to have been solved. The situation is shown in figures issued by the Bureau of Education, Department of the Interior, in a bulletin for 1914. According to these figures, the school attendance, in percentages, of children 6 to 14 years of age is as follows:

#### 90 PER CENT. AND OVER.

Connecticut	Nebraska
Iowa	New Hampshire
Massachusetts	New York
Michigan	Vermont

#### 80 to 90 PER CENT.

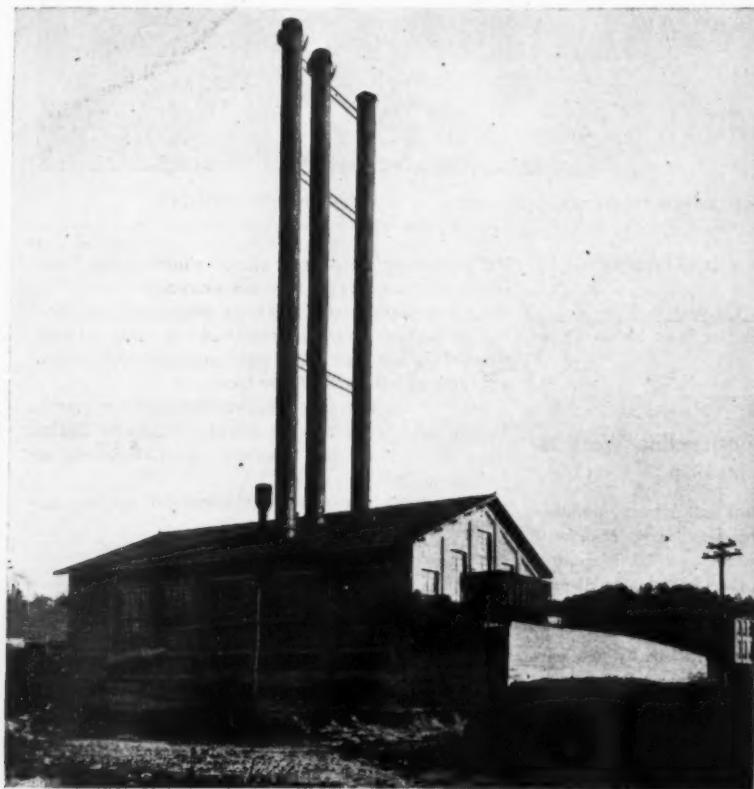
California	New Jersey
Colorado	North Dakota
Delaware	Ohio
Idaho	Oklahoma
Illinois	Oregon
Indiana	Pennsylvania
Kansas	Rhode Island
Maine	South Dakota
Maryland	Utah
Minnesota	Washington
Missouri	West Virginia
Montana	Wisconsin
Nevada	Wyoming

#### 70 to 80 PER CENT.

Kentucky	North Carolina
Mississippi	Texas
New Mexico	

#### BELOW 70 PER CENT.

Alabama	Louisiana
Arizona	South Carolina
Florida	Virginia
Georgia	



AUXILIARY STEAM PLANT OF THE NORTH CAROLINA ELECTRIC POWER CO. AT ASHEVILLE, N. C.



INTERIOR BOILER-ROOM OF NORTH CAROLINA ELECTRIC POWER CO.

# Great Prosperity of States South Through High Prices for Farm Products

DIVERSIFICATION IN MUCH FAVOR AS MEANS OF CONTINUED PROSPERITY—  
PACKING HOUSES AND STOCK RAISING GAINING STRONG  
FOOTHOLD

By ROY G. BOOKER.

Atlanta, Ga., November 10.

There is no doubt of the great prosperity of Georgia and surrounding States. The high price of cotton and other Southern farm products is the cause. The writer has just completed a trip, covering a large portion of the State of Georgia. There are evidences of this prosperity on every hand, and this is particularly true in the small towns and cities of the State, which are primarily agricultural centers. In these places the writer was told that people are not only paying their bills, many of which are of several years' standing, and are buying liberally of necessities, but are investing heavily in luxuries. Everywhere, as the writer was informed, automobile dealers are weeks behind in their deliveries, and this was especially true of the small cars used generally by farmers.

In the five years that I have been covering this same territory there was never a time when more evidences of real prosperity were apparent than at the present. But the most pleasing observation of the whole trip was the preparations that are being made against the time when cotton will not be so plentiful, by reason of the expected boll-weevil, and when the prices will not be so extraordinary as they are now.

Farmers are getting ready for the coming of the boll-weevil, which they regard as the inevitable, in a systematic manner. The agricultural communities are preparing to combat the pest not only by whatever scientific methods they can employ, but by waging a counter fight which will minimize the financial effect of the onslaughts of the weevil on the South's chief crop. They are establishing diversified farm products markets to a degree that has never before been known in the South.

The growth of the packing-house industry is the most significant indication of this move, and its importance as a market for livestock is at once obvious. There are in this State alone at least a dozen plants either in process of organization to such an extent that their final establishment is assured, under construction or already established. When completed the aggregate investments in them will amount to several millions of dollars. And still there are others being proposed from time to time. What is true in Georgia is also true in adjoining States, for the people at last are thoroughly aroused to the importance of making the South more than a one-crop section, for without the other crops they can never expect to come in for permanent and plentiful prosperity.

There is an air of prosperity about the "packing-house towns" and a spirit of co-operation which breed confidence in the town. The packing-house, when successful, is essentially a co-operative institution, between the stock raiser and the plant owners. In many cases the stockman is a stockholder and the plant owner a stock raiser. It is necessary for them to get together to be successful. It is this spirit of co-operation that is making so many of the packing-houses successful.

It has been truly said that the packing-house is the father of other industries. In raising stock it is necessary to have plenty of mixed feed, and the result is that within the last two months equipment for more than 60 mixed-feed mills have been sold in three Southern States by one concern, the Williams Patent Crusher & Pulverizer Co. of St. Louis, according to information given to the writer by its Southern representative, F. L. De Marco of this city, and the orders for others are coming in so fast that that department of the machinery plant has been taxed to its capacity to fill orders.

To feed hogs it is proper to give them skinned milk. This leaves a surplus of pure cream. The result is that a creamery is a paying proposition in a community where there is much hog raising.

As a natural sequence, it seems that a community which goes in for hog and cattle raising is also a grower of diversified crops. Therefore, canning plants, grist

mills, creameries, feed mills and the like will in the future, no doubt, form their respective parts of the ideal diversified communities which the South is soon to be dotted with.

In Augusta the Georgia-Carolina Creamery Co. was established last spring. This firm has a commodious plant in the center of Augusta, equipped with the best machinery, and has been making a success since it started last March. It serves as a cash market for all the cream that is produced in the rural district contributory to Augusta. The Georgia-Carolina Packing Co. has been organized in Augusta, also with a reported capitalization of \$1,000,000, and proposes to erect a \$300,000 plant and use \$700,000 as working capital.

In Savannah the Georgia Land & Cattle Co. plans to establish a modern abattoir which will cost \$100,000, and it is proposed to begin operations about January. A site of 5000 acres of land has been secured for the abattoir, and the plan is not only to raise its own stock and buy that in the community, but to ship fresh meat to Savannah on motor trucks and to Brunswick, Charleston and Jacksonville by rail.

The writer was told, en route to Statesboro, that that town was "dangerously prosperous." This statement was found to be true to a certain extent. It is prosperous, but not dangerously so. The community tributary to Statesboro raised an unusually large crop of cotton this year, and with the high price that has been prevailing for weeks there is a certain delirium of prosperity prevalent. But with it all the citizens realize that such a situation cannot obtain every year, and are preparing now in this "fat year" for the possibility of the lean. There is under construction here a \$150,000 packing plant, which will be put in operation next February. Thomas D. Van Osten, called "the father of the Statesboro packing-house," and editor of the Statesboro News, is given the credit for having started the movement which is to end in the establishment of one of the finest packing-houses in the South. The Bullock Packing Co. is the name of the company, and there are over 700 subscribers to the stock, most of whom are farmers, who will furnish the raw material for the plant when it is completed. Brooke Simmons is the president of the company.

There are plans under way now for the establishment of several supplementary industries. Bullock county produces a large amount of sorghum, and a syrup mill utilizing this product would doubtless be a paying proposition.

So great has been the interest in hog and cattle growing in this section since the agitation for the packing plant was begun that hundreds of pure-bred specimens of both kinds of animals have been brought in from the West and other livestock sections for distribution in this community. In 1910 Bullock county had 65,428 hogs, according to a Government report, but local business men say there are at least three times that many in the county now.

Statesboro and Bullock county are destined to become important communities, and as an important factor in this predicted prosperity it seems unfortunate that Statesboro, as a center of it all, should be without good streets and several other municipal improvements which mean so much to a community. That these things will come in due time, along with the general awakening, is confidently predicted by some of the local business men who have already accomplished much for their section.

In Waycross the writer was shown over the Waycross Packing Plant, owned solely by the Waycross Light & Power Co. This plant was put in operation on the 5th of this month, and is one of the few that have been established without local capitalists. It is owned and operated with Northern capital, because that capital realizes that there is good possibility of it making a success. An interesting feature of the campaign to

provide raw material for the plant was the move on the part of the First National Bank of Waycross, which bought 1000 pure-bred pigs and through the county pig club they were placed with the young farmers on the condition that they pay the bank for them either with two smaller pigs later on, or after they had sold the pigs which they had fattened, pay the note covering their original purchase price. Forty of these pigs, which were turned over to their present owners last May, were exhibited at the Southeastern Fair here this fall and 21 of them won ribbons. The Waycross Creamery has been incorporated with a capital stock of \$10,000 to utilize the surplus cream of this community.

In two previous issues of the MANUFACTURERS RECORD detailed reports of the prosperity of Tifton were published. Tifton will have a packing plant, a feed mill, a grain mill and an oil mill for crushing peanuts.

The Georgia Packing Co. at Columbus is reported to be doing a good business. This plant was established over a year ago, and was one of the first to be constructed in Georgia.

The prosperity of Moultrie, "the pioneer packing-house town of Georgia," is too well known as such to require especial mention here. This community is enjoying a wonderful season, and the territory contributing to it is in good condition. It is reported that there are approximately \$4,000,000 deposited in the various Moultrie banks. The writer called on John L. Greer, secretary of the C. L. Brooks Engineering Co. in Moultrie, which concern is making a specialty of constructing packing-houses. Mr. Greer had just returned from a trip through North and South Carolina and Tennessee. He stated there is great interest in all the States he visited, and that it is probable that several plants will be established in each State within a year or so.

The business men of Milledgeville are planning the establishment of a packing plant. Also a cold-storage warehouse for eggs and vegetables.

It has been repeatedly reported in the MANUFACTURERS RECORD and other papers that two large packing plants will be established at Macon.

There is a movement under way looking to the organization of a company to build a plant at Lagrange, which community is in a prosperous condition. Fuller E. Callaway, president of five cotton mills here and one in Manchester, stated that all his mills were running 24 hours a day. This is due to the facts that orders for the finished product are good and that this group of mills was fortunate enough to secure a large supply of cotton before the price reached the present high mark. A great deal of interest has been aroused through several interviews Mr. Callaway has given out to Southern papers recently regarding the cotton situation.

"I said on the day that cotton went to 20 cents," Mr. Callaway declares, "and I still stick to it, 'sell your cotton, pay your debts and get ready for the coming of the boll-weevil by planting a small crop early next year, so as to beat the weevil to it, and then raise enough food products to keep you and your stock going through the summer.' Above all things, the people of the South do not want to do is to gamble on cotton. It would be a pity for the South to gain as it is doing this year and then lose all in a foolish speculation. Now is the time to sell, and not the time to buy futures. Let us ride this wave of prosperity while we have a chance, and when it goes past it will at least leave us on our feet."

With Mr. Callaway I went to Chipley, and here was seen one of the many feed mills which are being established so fast in the South. This plant was operated by the United Manufacturing Co., and was connected up with the c'ton gin owned by the company. It is run on the same business principle as the gin. The farmers from the surrounding country bring their forage crops in for grinding and mixing, which is done for a toll. Almost every available forage crop is being used in making this feed, and it is not only reducing the feed bills of the farmers at the general stores, but is utilizing some of their heretofore waste crops.

"This mill," Mr. Callaway said, "is the real basis of the livestock industry, and there should be one run in connection with every cotton gin in the South. It is a paying proposition, for the gin only runs a part of the year, and the rest of the year this could be run with the same power that is used by the gin. I propose to establish one at once in connection with my gin."

"As a result of the packing-house campaign there is one fact that stands out pre-eminently. It is this: If Georgia is any criterion, it is evident that the South is beginning to really diversify."

## MILLION BALES OF TEXAS COTTON TO JAPAN.

### Large Increase in Spindles Reported from Japanese Cotton Mills.

Austin, Tex., November 10—[Special.]—Double the amount of cotton will be exported from Texas to Japan this season, as compared with the exportation of the staple to that country last season, according to J. G. Goldbaum, who is connected with a large firm of Japanese cotton buyers that has offices in this city. Mr. Goldbaum says that fully 1,000,000 bales of cotton will be shipped to Japan this year. Buying for that market has been unusually brisk ever since the season opened.

There has been an increase of approximately 500,000 spindles in the cotton mills of Japan since last year, Mr. Goldbaum says. This increase brings the total number of spindles up to about 3,500,000. The significance of this number of spindles lies in the fact that the "mule" type is used, which, with the cheap labor that the mills of Japan employ, enables them to turn out double the quantity of manufactured goods that the same number of "ring" spindles in this country are able to produce.

### Corrupt Politics and Its Relation to Lynching, as Viewed by a Georgian.

Hallaburton Hall,  
Clarkston, Ga., October 18.

*Editor Manufacturers Record:*

I have read with much interest Mr. H. C. Fuller's article on lynching and your comment on same in the issue of September 14; also Mr. T. W. Shelton in defense of the lawyer, Mr. Fuller having laid the blame upon the judges and lawyers. But before I had finished reading the sixth line of Mr. Shelton's article it had reminded me of the Shadow Lawn eight-hour speech, in which nothing was said about increase in wages, nor any limit being placed on the number of hours one shall work, nor what society demanded the law. Mr. Shelton, in his scholarly article, does not mention "lynching." He makes it clear, though, that we have a Constitution that was written by "men who had the presence of God and the love of freedom in their hearts, and it might have been an inspiration, so exact is it in its checks and balances and correlation as suitably to deal with the human equation for all time to come," says Mr. Shelton, and that the lawyer lawyers have not kept faith.

Mr. Shelton, I suppose, knows the Declaration of Independence and our Constitution by heart. Hence he must know what Mr. Thomas Jefferson had in his mind when, in 1791, he uttered the injunction that Mr. Shelton referred to, "to render the judiciary respectable by every possible means, to wit, firm tenure in office, competent salaries and reduction of their numbers." Now, before Mr. Jefferson made use of the words "reduction of their numbers" he wrote, in July, 1776, "He has erected a multitude of new offices and sent hither swarms of officers to harass our people, and eat out their substance." Again he wrote, "He has combined, with others, to subject us to a jurisdiction foreign to our Constitution and unacknowledged by our laws, giving his assent to their acts of pretended legislation." So Mr. Shelton must have not only been "forcibly struck" by the letter of Mr. H. C. Fuller, but he must have felt the truth of your words in your comment on Mr. Fuller's letter when you said:

"We are suffering from the rotteness of politics, and if that part of the whole political element of the country—judges, juries, sheriffs and all others who are in any way responsible for this condition—could be forever banished to some distant island of the sea, the country, and the South especially, would breathe a newer and cleaner and purer and sweeter atmosphere of business and social life."

As above stated, Mr. Shelton did not mention the word "lynching," that is the subject under discussion, and I appreciate the frankness in which the MANUFACTURERS RECORD and Mr. Fuller have spoken out in meeting on this horrible crime that is being committed weekly in the South, and I feel that Mr. Shelton and

the other good lawyers are going to help us tear out the roots of lynching in the South.

In my judgment, the Constitution is all right, and the "executive," the "legislative" and the "judicial" will each remain independent one from the other just so long as the lawyer lawmakers wish it to be. It would be childish to think otherwise. I am aware of the fact that for the last five years there have been passed in our National and State governments some 12,000 laws per year, or 60,000 in the five years, but honest men can have the bad ones repealed.

Lynching in the South is a fact, not a theory. In your issue of August 24 I showed by statistics 78 lynchings in nine and one-half months in the United States, and 77 of them were in the South. This, I said, was caused by the multitude of county governments within the Southern States, and I stick to it. There is no land under Heaven where the officers swarm from so many hives as in the State of Georgia.

A few days ago our newspapers were telling of a woman who went to intercede in a dispute between her son and an overseer; the man attacked the boy's mother; the boy felled the overseer and fled. When he was captured he did not know the man was dead and that his mother had been lynched. The man who notices things and remembers them will tell you that the majority of those lynched never see inside of a courthouse from the time the notion is taken to lynch until their eyes are closed in death on the tree.

Now, I will give some figures that the doubting Thomases can look up. The six New England States have combined 67 counties; Georgia has 152.

The Middle States—New York, New Jersey, Pennsylvania and Delaware—have combined 153 counties; Georgia has 152.

The four Middle States have a population of 19,521,214; Georgia has only 2,609,121.

The six New England States have a population of 6,652,683; Georgia has only 2,609,121.

The 16 Southern States combined have 1504 counties, which constitutes an army that is controlled and presided over by 16 State arms or State governments, besides a large army of politicians, and a still larger army of more respectable non-producing gentry, and there are two other large non-producing armies that are helping to keep the "dear peepul" away from the savings banks of the "dear solid South."

Now we come to the milk in the cocoanut, and I thank God for the peerless and fearless MANUFACTURERS RECORD, a paper that is, I might say, one in ten thousand that never flinches when it comes to a matter of truth and patriotism. If the lawyers and lawmakers had been one-tenth as true to the nation as the MANUFACTURERS RECORD, there would be no lynching or flinching or talk about the judiciary being encroached on by anything. It is an insult to anyone who has brains enough to keep out of a sawdust pit.

Excuse me for not handing you the cocoanut. Here it is. Drink.

The Constitution of the United States of America, Article IV, Section 4, says that the United States shall guarantee to every State (and county) in this Union a republican form of government, and shall protect each of them against invasion; and on application of the Legislature or of the Executive (when the Legislature cannot be convened) against domestic violence (see the oath in Article VI) the Senators and Representatives before mentioned, and the members of the several State Legislatures, and all executives and judicial officers, both of the United States and of the several States, shall be bound by oath or affirmation to support this Constitution, but no religious test, etc. So here we find the law handed down to each of the 48 States and each State giving the same law to each little State or county it creates within its metes and bounds, and mark you, this multitude of little counties have the same guarantee from invasion that the States are given in Article IV, Section 4, of our Constitution; and it is a grand law, were it not abused. This is what Thomas Jefferson had in mind when he said "competent salaries and reduction of their numbers."

Think and tell me if you can what paragraph in history denies that if power is given to any people on earth, be they Catholic, Jew, Protestant, Democrat, Republican, Labor Union or what not, they will take life at will?

Not since one of the 1504 little county or family governments has been born in the Southern States has papa or the State dared to invade or enter therein unless requested by her sheriff, not even when five were lynched

on one tree, three men and two women, and one man shot for good measure, all on the same day. While these conditions are allowed to exist the American citizen should forget the word Lusitania.

States in our Union with small number of counties having refrained from lynching, in face of the unknown power of suggestion, is invincible proof that the States containing large number of counties should be reduced to a sane and civilized basis, which profit and good to the States would stagger the imagination of the South.

I have no doubt Mr. Fuller has a right and a just cause to jump on his courts. I speak advisedly when I say that there have happened in our courts things that would make the things he speaks of look like a small side-show. The trouble is in the small counties maintained by "rotten politicians" throughout the United States. The union among the officeholders is as loyal as that among lawyers, which is far more loyal than any labor union in existence in America.

It is unthinkable that the guarantee of our nation should be treated as a scrap of paper. With several hundred lynched since Mr. Wilson took the oath I mentioned above, I have yet to hear of him opening his mouth or raising a hand toward attempting to protect one life from being lynched. He could at least have written one "note." Duck and dodge the question as we may, Mr. Wilson has failed in this situation, and it is criminal to attempt to deny it. W. E. WIMPY.

### Pisgah National Forest Now a Federal Game Preserve.

Pisgah National Forest, in Western North Carolina, has been made a Federal game preserve by proclamation of President Wilson. This is the first Federal game preserve of its kind to be created east of the Mississippi River.

The Pisgah National Forest consists largely of the George W. Vanderbilt estate, part of which has been purchased by the Government. The land is located near Asheville and Biltmore, N. C. Owing to the protection against hunting which has been afforded the tract for a number of years, the game has not been killed out, as is the case in most places in the Southern mountains. Deer, wild turkey and pheasants are said to be plentiful. A movement is now on foot to place a herd of elk and one of buffalo in the preserve this winter.

### Jacksonville to Have Florida's First Flour Mill

Jacksonville, Fla., November 8—[Special.]—That Jacksonville will soon have the first flour mill ever established in the State is the announcement of the Dixie Milling Co. of this city, who have applied for a charter to do a general milling and blending business with a capital stock of \$25,000, with privilege of increasing their capacity and capital when needed.

The officers of the Dixie Milling Co. are J. E. Browne, president; E. B. Geiger, vice-president and treasurer, and Jas. G. Herndone, secretary. The mill when completed will have a capacity of 300 barrels of flour per day, and will occupy 30,000 square feet of floor space. According to President Browne, the company intends doing a large business with Cuba and the West Indies, and arrangements for the handling of their products in those countries have already been consummated.

### Atlantic Paper & Pulp Co.

Permanent organization has been effected by the Atlantic Paper & Pulp Co., whose president recently wired the MANUFACTURERS RECORD that the new corporation will build a \$500,000 pulp and paper plant; I. H. Fetty, president; M. T. Nichols, vice-president and general manager; S. C. Lawrence, secretary; Edwin Shaw, treasurer; all of Savannah.

The plant will be built at Port Wentworth, on the Savannah River, several miles from Savannah. It will have a daily capacity of 50 tons, and is expected to be completed within the next six months.

This new enterprise was recently incorporated with a capitalization of \$1,000,000, and it is affiliated with the Savannah River Lumber Co., with annual capacity of 200,000,000 feet of lumber, of which company Mr. Fetty is president and general manager and Mr. Shaw is assistant secretary-treasurer.

## Zinc Mining in North Arkansas Shows Continued Activity and Production

**PROSPECTS FOR GREATEST DEVELOPMENT IN HISTORY OF FIELD DURING COMING WINTER—MANY RICH STRIKES RECENTLY RECORDED.**

By TOM SHIRAS, Mountain Home, Ark.

North Arkansas zinc mine operators are making the same heavy production now as they did when ore was at its high level, and the heaviest production in the history of the field is promised for this winter. Many new prospectors have arrived, and are still coming in. During the past few weeks some of the richest strikes ever recorded in the field have been made, and the production of some of the mines has been phenomenal, mill capacity considered. Development work is progressing steadily in new territory, and some promising new districts are being opened up. Deep drilling is in progress in the Buffalo River country, near the mouth of Cedar Creek; also in the zinc camp in Boone county. In the latter camp deep shaft prospecting is under way, while the mining of the shallow ores goes on uninterrupted.

The field as a whole has demonstrated that it can produce at a profit on a normal price of ore. The principal ore mined in the field at this time is calamine, or silicate and carbonate of zinc. While it does not bring as high a price as the sulphide, or jack, it is generally found lying in richer bodies, and by the tunnel method of mining can be produced very cheaply. It is quite safe to state that the mines in operation now are putting ore in the bins at from \$15 to \$25 per ton.

A large part of the output of the field at this time is going to the Fort Smith Smelter Co. at Fort Smith, Ark., and the Arkansas Zinc Co. of Van Buren, Ark., the two new smelters completed this summer in the new gas field in the western part of the State.

During the last few weeks some of the richest ore bodies ever encountered in the field have been opened up. At the Big Hurricane mine, one of the J. C. Shepherd group, near Pindall, on the M. & N. A. Railroad, a body of jack has been discovered, underlying the carbonate already developed. Production at this mine now is between 15 and 20 tons per day, and will be increased between 8 and 10 tons upon the starting of a tailing mill, which will begin operations this month.

The Morning Star mine, one of the oldest in the field, located on Rush Creek under the management of Capt. Geo. Chase and Joe Reed, is in the richest ore deposit ever encountered in the history of the mine. The strike was made in a second break or syncline running parallel with Rush Creek. The bulk of the ore is carbonate, and the mill is showing a recovery of from 20 to 25 per cent. on the dirt taken from the headings.

The headings of the Silver Hollow on Buffalo River, that is being operated under the supervision of Zimmerman and Schofield of Rush, have lately been driven into a heavy body of jack. The headings of the tunnels are back in the mountain approximately 1000 feet, and 40 feet below the bed of Buffalo River. This discovery proves quite convincingly that large bodies of sulphide ore will be encountered below water level in the deeper fractures.

A new drift at the Bonanza mine, on Cow Creek, has gone into a very rich run of jack that will return an average recovery of 15 per cent. Those who are interested in this property are E. J. Loop of Cotter, Dr. Walter Gray of Rush, Tom Foster of Cotter and Ol Kirkland of Little Rock. The Chickasaw mine, in the same camp, has lately started its new mill, and shipped its first car of ore last week.

The Edith mine, at Rush, operated by the Edith Mining Co., is in bonanza ore and for the last two weeks has been making a record production. Their largest day's run was 31 tons. L. F. Hirshler of New York city has lately taken over the active management of the property in conjunction with Capt. Charles La Vasseur.

The Lucky Dog Mining Co. has been organized and machinery has been purchased for a mill, and is now being placed on the ground. This company will operate the Lucky Dog mine, a jack proposition on Tomahawk Creek, a few miles west of Rush. The officers of the company are Boss Straub, president, of Helena, Ark.; James McCarty, vice-president, of Yellville, Ark., and Amos Jarman, secretary-treasurer, of Helena, Ark.

They expect to have their mill running within the next 90 days. J. C. Floyd and associates of Yellville, who own the Little Star mine in the same vicinity, will install a mill this winter on their property.

Teagarten Bros., who are operating the Carbonate Point property near the mouth of Cedar Creek, in the Buffalo River district, have a drill at work seeking lower ore levels. Already they have cut one good run of carbonate ore. The Springfield Mining Co., operating a lease on the Thompson land, just below the mouth of Cedar Creek, who have a shaft down 100 feet in good ore, will determine the depth of their ore by deep drilling.

The Rush camp, formerly the largest unincorporated city in Arkansas, received its incorporation charter last week. An election was held and city officials chosen for the coming year. As many large mines are located within the corporate limits, a considerable municipal tax will be available, and numerous substantial improvements are planned, such as street improvement, bridges, etc.

Another new town in the Buffalo River district is springing up in Baxter county, at the Buffalo station on the White River division of the I. M. & S. R. R., the shipping point for all the ore mined on the lower Buffalo, and a part of that is produced in the Rush camp. The town has been named Oredale, and is being promoted by the Oredale Townsite Co. Several buildings have been started here.

In the Zinc camp, in Boone county, L. L. Brown, a pioneer operator and ore buyer, has just put a new mill in operation on the Frisco property, and is making a good production. The Resin Jack Mining Co., operating the Resin Jack mine, are opening up a rich deposit of silicate. Much of this is free ore. The mill dirt shows a good recovery. The Jackson Mining Co., operating a lease on the W. H. Almy land, is prospecting, and the work is showing up a heavy run of very rich ore running into the mountain on an incline. It has cut this for a distance of 120 feet, and is still driving.

Jack Whiteaker, a churn drill operator of Lead Hill, has just completed a hole in Coon Hollow for Ardmore (Okla.) people. At 44 feet his drill went into open ground filled with ore and talus clay that extended to 64 feet, the cuttings showing a very rich run of ore. D. W. Cave, representing the Sugar Orchard Mining Co. of Pittsburgh, Kans., is sinking a deep shaft on a 400-acre tract owned by the company. This is the first determined effort to strike deep ore on the ridges lying between two producing mountain sides. He expects to go into ore when he reaches the proper level.

Thos. F. Cary of Norman, Okla., closed a deal last week for a five-year lease on the Madison mine. He will make substantial improvements in the mill before starting active operations. L. T. Westrich is opening up new ground on Maulden Creek, eight miles northwest of this place. He is also investigating the calcite process of reducing carbonate ores. This is feasible on all ores made up in lime. The ore-bearing rock is burned into lime. It is then drawn and thrown into water, the lime slacking and dissolving, leaving the ore clean.

In the Dodd City camp Jerd Stillwell has just completed a contract shaft on the McKay land for Robt. Gosnell and R. B. Woodruff of Springdale, Ark. At 98 feet he cut into a very rich run of jack. The Quapaw Mining Co., a Little Rock company, is making a good production at the Marble mine, under the management of T. H. Bunch. Development work there is disclosing a big ore body, which insures steady operation of the mill. The Governor Eagle, being operated by Pace Young of Dodd City, Homer Pierce of Harrison and associates, is making a splendid production of high-grade jack. They have sold a number of cars that have brought them a premium, running above the 60 per cent. market base.

Two new sections of the field—that section of the Buffalo River country lying between the mouth of

Cedar Creek and Buffalo and the north and west parts of Baxter county—are developing some splendid properties.

Three headings at the O'Meara property, in this field, have been driven back 100 feet in a high bluff that overlooks the Buffalo River. All of these headings produce free carbonate, and mill dirt in large quantities that will show a recovery of from 10 to 20 per cent. A mill will be built on this property this winter. The A. F. S. Cooper mine, adjoining, is in the same formation, and a mill is also contemplated for this mine this winter. Mine 16, owned by W. T. Barr and associates of Batesville, Ark., under the management of Mr. Barr is producing large quantities of free ore. The ground blocked out and mill dirt stacked out on the dump taken out while getting the free stuff, is estimated at approximately 120,000 tons, from which a value of 10 per cent. will be recovered, as expected, when milled. The early erection of a mill is contemplated.

This mine is located on Brush Creek, and a well-defined lead of ore cropping from the mountain side from under the sand ledge can be traced for a mile. John Connell and Grant Shepherd of the Shepherd Mining Co. at Rush have lately acquired leases on several hundred acres of this ground, covering a large part of this outcrop, and contemplate immediate development at a number of the most favorable places.

North and West Baxter county is showing some fine properties, which have been under course of development during the last few months. The Bear mine, on the North Fork River, has been developed to a point where it will justify a mill. The lease is owned by the Shepherd Mining Co. of Rush.

C. C. Feemster, operating on a 10-acre lease seven miles north of Mountain Home, on Bald Dave Mountain, has out several hundred tons of high-grade mill dirt and a quantity of free ore. J. T. Crawford, operating on a 60-acre lease in the same district, is developing a body of shallow carbonate ore running anywhere from 10 per cent. to high grade, running above 40, that lies from a foot and a half to four feet under the surface of the ground.

The Big John mine, on Bruce Creek, in the west part of Baxter county, has been leased to C. D. Harrington and associates of Salina, Kans. The fee in the property is owned by Mrs. P. H. Gehr and associates of Mountain Home. The ore in evidence here is carbonate, and the work that is being done has disclosed an old underground water-course, paralleling a prong of Bruce Creek, as the ore channel.

### Automobiles, Machinery, Tools, Etc.

N. V. TECHNISCHE HANDEL-MAATSCHAPPIJ, Amsterdam, Holland.

"We are interested in anything and everything electrical, such as: Wires; cables; machinery; tools; telephones; pumps; motor cars; motor-boats; boat motors. Be pleased to receive catalogues and prices for delivery f. o. b. New York. We pay cash against documents in New York. Since outbreak of the war we have been doing business with John A. Roebling Sons' Company and Manhattan Electrical Supply Co., New York; Belden Manufacturing Co., Chicago, Ill.; Stack pole Carbon Co., St. Marys, Pa.; Acheson Graphite Co., Niagara Falls, N. Y."

### Cuba Wants Sawmills and Twine.

CUBA LUBRICATING CO., Cuba 65, Habana, Cuba.

We are in the market for hemp twine, such as is used for sewing sacks and tobacco bales. We would be pleased to receive also some catalogues of sawmill machinery. The machinery is wanted by one of our customers. It is his intention to install a small mill on timber land he owns and have it prepared for the market. Most of the timber is hardwood.

### Cotton Goods Wanted for Santo Domingo.

Louis A. ABREU, 54 Arzobispo Merino, Santo Domingo.

I am interested in securing agency for a manufacturer of cheap cotton goods, drapery, muslins, etc.

# The Iron, Steel and Metal Trades

## \$24 for Alabama Pig-Iron.

[Special Dispatch to Manufacturers Record.]

Birmingham, Ala., November 14.

The Alabama Company confirms sale of quite a tonnage of iron yesterday at \$24 for delivery last half of 1917. This, however, is their high manganese Clifton iron.

The iron market shows increasing strength, and we look to see prices advance again within the next day or two.

Y. A. DYER.

## SOUTHERN IRON ADVANCED \$1.50 A TON

**\$20 Pig for First Half of 1917 Expected to Be Firmly Established Soon Throughout Birmingham District.**

Birmingham, Ala., November 11—[Special.]—The price of Southern pig-iron again advanced \$1.50 per ton over the week previous, and some substantial sales have been made on the advanced price-list. The base price has now moved to \$19 to \$20 per ton f. o. b. cars at the furnace for any delivery between now and July 1, 1917. Numerous solicitations have been received by the furnace interests of the district for prices on last half pig-iron, and quite a few firm offers have been made by buyers for their requirements on a basis of \$17.50 to \$18.50 per ton at the furnace, though these prices have not been attractive to sellers. As yet none of the producers have opened books for the last half of next year, though heavy pressure is being brought to bear on them by their old line of customers, and it is thought that by the first of December there will be some definite decision arrived at whereby the books will be opened for at least the third quarter of 1917. While one large producing interest was quoting \$19 per ton at the furnace up to Saturday, it was stated by an official of that company that certainly not later than the middle of next week the price would be advanced to \$20 per ton at the furnace. This will place all Alabama producing companies on a firm basis of \$20 per ton for first half 1917 iron.

There has been some large tonnage of basic iron offered in the South during the week, one interest in the Middle West offering 75,000 to 80,000 tons at \$20 per ton at the furnace. Basic iron in the Birmingham district is a scarce article. The production of pig-iron in Alabama during October eclipsed all previous records, being at the rate of about 250,000 tons per month. This is on the basis of 3,000,000 tons per annum, or practically 1,000,000 tons more than was produced in 1915.

The Thomas furnace of the Republic Iron & Steel Co. has been repaired and is ready to go in blast, but it will not be blown in until after the first of the year on account of the car shortage. Officials of the company report that it is a difficult task to get sufficient cars to load iron from two furnaces from the block. Some of the furnaces in the district have had to pile considerable iron on account of car supply, which otherwise would have been shipped direct from the block. It has taken a long time for Southern iron industries to realize the fact that owing to the great increase in steel-making capacity, with a corresponding decrease in blast-furnace capacity, the heavy demand for basic iron would of necessity bring about a tremendous shortage of foundry iron, thereby at last stimulating the foundry market by the blowing in of basic furnaces. However, the full force of these conditions is now being felt in all Southern iron-producing centers, and it is the opinion of well-informed and reliable iron men that before the end of the present year, or early in next year, the foundry iron market will be \$25 per ton.

The producers of cast-iron pipe feel apprehensive about the present course of the pipe market, owing to the heavy advances made in the pig-iron market. Prices of pipe have advanced \$1 per ton over last week, but manufacturers are of the opinion that this feature only accentuates a heavy lull in the market. While all plants are at present running full time, it is probable that the output will be somewhat curtailed in the near future. Following prices are quoted per net ton f. o. b. cars at the plants: Four-inch, \$30; six-inch and up,

\$27, with \$1 per ton extra for gaspipe and 16-foot length pipe.

The old material market has shown a decided improvement the past week, and prices in all lines have materially advanced. Old car wheels have been in heavy demand, and prices on this material have advanced as much as \$1 to \$1.50 per ton.

The coal and coke market continue at maximum figures. The coal operators feel that the great stress and strain would be relieved if cars could be obtained. Some of the mines in the Birmingham district are only operating an average of two days per week. These conditions not only make for high cost of operations in the long run, but have a demoralizing effect on the labor. Steam coal is selling as high as \$4.50 to \$5 per ton, and tiny quantity is scarce at those figures. Many steam plants have been forced to use wood and oil as substitutes for coal. The coke market is firm at \$4.50 to \$5 per ton for foundry coke and \$3.50 to \$3.75 for furnace coke. There is no furnace coke available in the whole district.

Following are producers' and dealers' prices per gross ton f. o. b. cars plants:

### PIG-IRON.

No. 1 foundry and soft.....	\$20.00 to \$20.50
No. 2 foundry and soft.....	19.00 to 20.00
No. 3 foundry.....	18.50 to 19.00
No. 4 foundry.....	18.25 to 18.75
Gray forge.....	17.75 to 18.25
Basic.....	19.00 to 20.00
Charcoal.....	23.00 to 24.00

### OLD MATERIAL.

Old steel axles (net ton).....	\$25.00 to \$26.00
Old steel rails.....	12.50 to 13.00
No. 1 wrought.....	13.00 to 14.00
Heavy melting steel.....	12.00 to 12.50
No. 1 machinery.....	12.00 to 12.50
Car wheels.....	12.50 to 13.00
Tram car wheels.....	12.00 to 12.50
Stove plate.....	9.75 to 10.00
Shop turnings.....	6.00 to 6.50

## STEEL AND IRON CONTINUE TO RULE STRONG.

**Billets and Sheet Bars Still Soaring in Price. Car Shortage More Serious—Pig-Iron Values Higher.**

New York, November 13—[Special.]—The temporary uncertainties of the Presidential election apparently did not have the slightest effect upon the steel situation last week. If possible, the steel market was stronger than ever, and the demand for various products was just as insistent as it had been in the past few months. Pressure upon steel plants was reflected in the placing of many more small orders for extensions to foundries, mill and shops. Railroads placed more bridge work, the largest coming from the Pennsylvania and the Maine Central railroads, aggregating about 6,000 tons. Rail orders closed last week amounted to 100,000 tons, including 80,000 tons for export to France. These rails were designed for shipment in the last quarter of 1917, but it is almost certain that shipment will extend over into the first quarter of 1918. Canadian car builders closed for 15,000 tons of structural steel shapes and plates with Pennsylvania mills for delivery in the first half of next year.

As in the previous week, car buying by domestic railroads was a dominant feature of the steel market. Orders for no less than 22,000 cars were placed during the week. These cars will require 395,000 tons of steel, and builders who have reserved space with mills have been compelled to extend their reservations. Despite these heavy purchases, there are now orders in the market amounting to about 20,000 cars. Locomotive builders also report a large influx of business, involving 100 light tank engines for England and 126 engines for domestic railroads.

An order for 300,000 tons of shell bars was placed by the Entente Allies with two prominent mills last week, and they are also negotiating for 500,000 tons additional. The United States Government distributed some orders for shells, about 325,000 in all, and is taking bids on 15,000 large shells. Agricultural implement manufacturers were also large buyers of steel bars last week.

The entire production of the American Sheet & Tin

Plate Co. for the first half of next year has been sold at a price of \$6 per base box.

The American Steel & Wire Co. announced another advance of \$3 a ton in wire products, putting prices for near delivery up to the highest mark since 1900. Structural steel business was featured by a purchase of 10,000 tons beams for shipment early next year by the French Government. Another order for 50,000 tons beams was also placed by the same country through J. P. Morgan & Co.

The car shortage in the Pittsburgh district steel mills increased during the week, and the situation is further augmented in its seriousness by the close advent of inclement weather. Every effort is being made by the mills to forestall all trouble as much as possible. The mills are trying to ship everything that they can, and give preference to those products which are the hardest to stock.

Prices on billets are now being quoted on a range between \$50 and \$55, and from \$52 to \$55 on sheet bars.

While the excitement in pig-iron subsided somewhat last week, business continued very active and prices advanced under brisk buying. All of the leading furnaces remain out of the market, and those which offered quotations made them so high that they were tantamount to a refusal to sell. Buffalo furnaces, for example, put up all grades for delivery next year to \$28, while Eastern Pennsylvania makers went up to \$25. Foundry iron is up another \$1, and the market for the second half of 1917 is now opened. The latest sales have been made around a basis of \$25 and \$26 for second half delivery. The higher prices were paid for mostly odd lots, while sales at \$25 have involved considerable tonnages. Basic continues to be quoted at \$23 to \$24. Sales of Bessemer iron for shipment over the next three or four months have been made at \$29 valley, or 50 cents above the highest price previously reported on small lots, and \$1 above what was recently done on large lots.

The unfilled tonnage of the United States Steel Corporation increased \$492,676 tons during October, according to the published report of the Corporation last week. This is the largest increase since last April. It amounts to about 39 per cent of the capacity, while shipments were 106 per cent. of capacity, or the largest in the Corporation's history. The enormous purchasing of steel to be used in the construction of railroad equipment was the main factor in this excessive business, but some large export contracts are also understood to have been quietly placed.

### STEEL AND IRON PRICE CHANGES.

(Dealers' average buying prices for gross tons.)

Bessemer billets (nominal).....	\$50.00—\$55.00
Open-hearth billets (nominal).....	50.00—55.00
Open-hearth sheet bars.....	52.00—55.00
Bessemer sheet bars (nominal).....	52.00—55.00
Forging billets.....	70.00—75.00
Wire rods.....	60.00—65.00
Tank plates.....	3.25—4.00
Steel bars.....	2.70—
Refined iron bars.....	2.75—2.85
Rails.....	47.00—48.00
Steel hoops.....	3.25—
Cold-rolled strip steel.....	6.25—6.75
Sheets, No. 28 gauge.....	3.65—4.00
Galvanized sheets.....	5.00—5.50
Wire nails, No. 28.....	2.85—
Cut nails.....	2.85—
Plain fence wire, base.....	2.80—
Barb wire, galvanized.....	3.70—
Railroad spikes.....	2.90—3.00

### Pig-Iron.

Bessemer, Pittsburgh.....	29.95
No. 2 foundry.....	25.95—26.55
Basic, valley.....	25.95
Gray forge.....	25.45—26.55
Basic, Philadelphia.....	25.00—26.00
No. 2 foundry, Northern.....	24.00—25.00
Low phosphorus.....	43.00—45.00
No. 2 foundry, Buffalo.....	27.50—28.00
No. 2 South, Cincinnati.....	22.90—23.40
Northern foundry, No. 2, Cleveland.....	24.30—25.50

Scrap prices unchanged.

## COPPER SOARS TO THIRTY-TWO CENTS A POUND.

Daily Sales of the Red Metal Average 100,000,000 Pounds—Great Orders in Market From Foreign Powers—Spelter and Tin Active, But Lead Remains Quiet.

New York, November 13—[Special.]—The past week has witnessed the most phenomenal situation that has ever developed in the history of copper. On three different occasions copper has created a remarkable situation since the outbreak of the European war, but the

past week has been the most remarkable of them all. It now appears very evident that there is a great deal more copper in the hands of producers than has ever been anticipated, and that the "scarcity" of copper and "sold-out" condition of the market" were simply phrases used by producers who were making every effort to prevent the market from becoming a runaway one. It would seem, however, that their efforts in this direction have been doomed to failure.

Under buying of a tremendous scale prices of spot electrolytic copper advanced to 32 cents a pound last week, the highest ever known in the history of the metal, while future deliveries went to 30 cents for first quarter, 29½ cents for second quarter and 28¾ cents for last quarter. Domestic and foreign buying was inconsistent and large, while on top of this pressure came an inquiry for 225,000,000 pounds from France for delivery in the last half of next year, and one of 200,000,000 pounds from England. Transactions in copper last week are estimated to have totaled 350,000,000 pounds, while on Wednesday alone 100,000,000 pounds were sold. The market closed the week excited and active. The three largest producers have disposed of all of their copper for first quarter delivery, and there still remains a good deal of buying to be done.

Business in spelter for the first quarter was very active last week, with prices moving steadily upward. Leading producers are still out of the market, and indicate that further advances are to be expected. Galvanizers were active buyers, while a considerable business came from brass manufacturers.

Developments in the lead market reflected little change in conditions from those previously reported. Demand was confined to small tonnages, but despite the inactivity the market held steady, the heavy forward selling of producers acting as a bulwark against reaction. The absence of spot metal in dealers' hands also helped to maintain prices. Producers are waiting for the re-

newal of buying by Canadian consumers, and indicate that they expect business to increase in volume in the near future.

Tin showed a steady upward course, although trading was not very active. Sharp recoveries at London and Singapore served to strengthen the market here. The trade appears to have recovered from the shock occasioned by the October statistics. Confidence of sellers has been restored, and predictions of higher prices are freely heard. The stock afloat to this country totals 4,377 tons, but almost 3000 tons of this total is on unknown steamers, so that the outlook for November arrivals is not as promising as it might be. Arrivals last week totaled only 300 tons.

### For Reconstruction Throughout France.

HENRI GOBINAT, Constructor, Rouen, France.

Have some estimates sent me in French for machines of kind I need, especially band saws and machines for sharpening and adjusting saws. If possible, have proposals sent me especially for materials and accessories relating to "knock-down" houses and building materials that can be rapidly erected. For such work I am well situated.

### Low Rate for Confederate Reunions Expected to Bring Record Attendance.

A one-cent passenger rate has been agreed upon for the twenty-seventh Reunion of the United Confederate Veterans and twenty-second Annual Reunion of the Sons of Veterans, to be held at Washington in the spring of 1917. H. F. Cary, general passenger agent of the Southern Railway, who is chairman of the

finance committee of these reunions, believes that this unprecedented rate will bring to Washington one of the greatest crowds in its history. The reunion will begin May 28, and will probably continue for a week. There will be an elaborate program of entertainment, with side trips to Baltimore, Gettysburg battleground, New York and other places.

### Electrical Equipment of Every Class.

STAUBLE & SALVINI, 46 Via Torino, Milan, Italy.

"This firm deals in electrical and mechanical products and is prepared to purchase on its own account or to handle as agent. Our firm is well organized for the trade in electrical apparatus and material, motors, lamps, recorders, meters, telephones and electrical supplies of all kinds. We have intimate relation with the dealers, secured after many years' experience in handling goods of domestic and German manufacture. We desire now to broaden our business connections in the American market. We shall be glad to get a list of American firms which make electrical apparatus and material and catalogues with prices and terms of sale."

### Wants to Represent Manufacturers.

GEORGE SAWYER, 106 Great Saffron Hill, London, E. C., England.

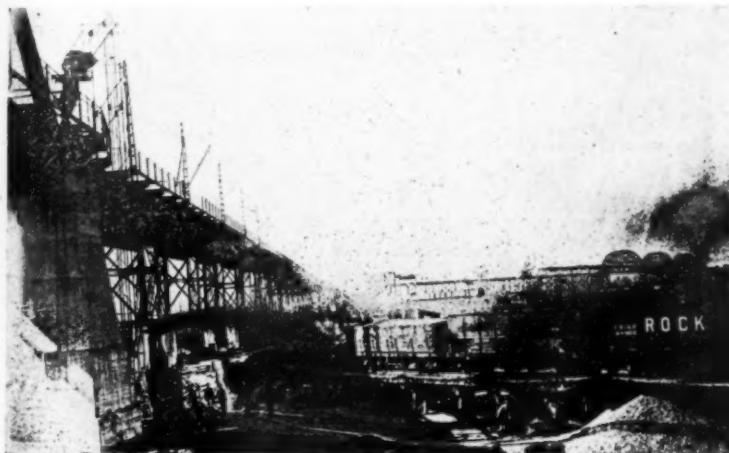
"Send me a copy of your latest issue. I wish to see if among your advertisers there are any with whom I can arrange some business, as I now import goods from the States. I am a citizen of the United States of America. For many years was general manager in Europe for the White Sewing Machine Co. of Cleveland, O."

### Fruit Trees and Plants for Mexico.

KURI PRIMOS SUCS., 2 a Flamencos 15, City of Mexico.

Please give directions of plants and fruit-tree sellers. Also give addresses of publishers of agricultural books.

### ST. LOUIS' \$6,250,000 MUNICIPAL BRIDGE NOW NEARING COMPLETION.



CONSTRUCTION WORK ON NEW MUNICIPAL BRIDGE AT ST. LOUIS, TO COST \$6,250,000.

An interesting summary, descriptive of the \$6,250,000 municipal bridge under construction at St. Louis, has been furnished the MANUFACTURERS RECORD by A. R. Ross engineer in charge of a portion of the work.

"The St. Louis municipal bridge across the Mississippi River is rapidly nearing completion," writes Mr. Ross. "The bridge, which is being constructed by the city of St. Louis in an effort to abolish an arbitrary rate of 20 cents per ton on freight and 25 cents per passenger charged by the Terminal Railway Association for transportation across the Mississippi River, is a combined railway and highway structure.

"The first construction work started in September, 1910, and continued from that date until April, 1913, when the funds supplied by the first bond issue were exhausted. The work completed by that date included foundations and superstructure for the river spans and

St. Louis approach and also retaining walls and embankments for the latter.

"Bonds were finally approved for funds to complete the bridge in November, 1914. Construction was resumed in February, 1915, and has been in progress continuously since that time.

"The estimated total cost of the completed structure, which is nearly six miles in length, is \$6,250,000.

"For the river crossing four piers were sunk to bedrock by the pneumatic caisson process. The eastern shore pier holds the world's record for depth by the pneumatic process, there having been 112.5 feet of water over the cutting edge when the caisson was sealed. The superstructure consists of three simple pin-connected truss spans, each 668 feet long, center to center of end pins, and 110 feet at the center. The railway deck carries two tracks, the highway a 30-foot roadway, two trolley tracks and two six-foot sidewalks.

"The approaches are for the main part of tower and girder construction, with several short spans on each side of the river. The longest girder span is 90 feet.

"The substructure of the approaches consists of octagonal footings resting on concrete piles, and in some cases supporting battered shafts.

"It is estimated that there will be used in the construction of the bridge 83,000 cubic yards of concrete, stone and granite, 190,000 linear feet of concrete piling and approximately 47,000 tons of steel.

"The highway approach will be open to traffic in about one month. It will be some time longer before the railway approach is completed.

"The bridge was designed by and erected under the supervision of Boller, Hodge & Baird of New York and their resident engineers, Brenneke & Fay of St. Louis. A. R. Ross has been engineer in charge of the latter section of the work."

## RAILROADS

(A complete record of all new railroad building in the South will be found in the Construction Department.)

### BRITISH INTERESTS SELL A SOUTHERN RAILROAD.

New Orleans & Northeastern Railroad Now Owned in America—Will Benefit Southern Railway.

J. P. Morgan & Co. of New York have bought from the English holders all of the securities of the New Orleans & Northeastern Railroad, 195 miles long, between New Orleans, La., and Meridian, Miss., which forms the southernmost link in the Queen & Crescent Route between Cincinnati and New Orleans, of which Fairfax Harrison, president of the Southern Railway, is also president. The price was \$12,500,000. It is stated that the sale was made at the request of the British Treasury officials to maintain sterling exchange upon a firmer basis, and it provides that the proceeds of the deal shall be used in the purchase of Great Britain 6 per cent. exchequer bonds due in 1920.

The New Orleans & Northeastern Railroad is one of the three important railway properties in the South controlled by English interests, through the Alabama, New Orleans, Texas & Pacific Junction Railways Co., Ltd. The other two controlled lines are the Alabama & Vicksburg Railway, 143 miles long from Meridian to Vicksburg, Miss., and the Vicksburg, Shreveport & Pacific Railway, 188 miles long from Delta to Shreveport, La., and Waskom, Tex. Baron Emile Beaumont d'Erlanger is chairman of the holding company, the Alabama, New Orleans, Texas & Pacific Junction Railways, Ltd., and other members of its board are Viscount Grimston, Hon. Edwin C. W. Ponsonby and John Varley, all of London. This company is, together with the Cincinnati, Hamilton & Dayton Railway and the Alabama Great Southern Railroad, also largely interested in the Cincinnati, New Orleans & Texas Pacific Railway Co. which leases and operates the Cincinnati Southern Railroad, the first section of the Queen & Crescent Route.

It is said that the deal was consummated in the interest of the Southern Railway Co. and the Cincinnati, Hamilton & Dayton Railroad Co., the latter's participation bringing the Baltimore & Ohio Railroad into the matter indirectly through its ownership of control of that road. The securities included in the deal are \$5,595,000 general mortgage 4 per cent. bonds of the New Orleans & Northeastern, \$1,500,000 income mortgage bonds and \$5,366,000 common stock of the road and 448,700 shares of stock of the Southwestern Construction Co., through which latter the interest in the Cincinnati, New Orleans & Texas Pacific Railway was held.

### WOULD DEVELOP TEXAS COAL LANDS.

**Fort Worth Connection Planned for Gulf, Texas & Western Railway.**

Construction of a railroad from Waco Worth to Salesville, Tex., about 45 miles, is proposed by B. B. Paddock and associates, according to a report from Fort Worth. The building of this line, it is said, would result in development of extensive coal lands in Jack and Young counties from Jacksboro to Olney, about 35 miles, because it would provide the Gulf, Texas & Western Railway with a direct line to and from Fort Worth. The coal lands are not only adjacent to the road, but they extend for miles to the north and south of it. John T. Witt, formerly chief engineer of the Gulf, Texas & Western, has begun survey for the proposed connecting line.

Among those associated with Captain Paddock in his plans are Ben. J. Tillar, George H. Colvin, I. H. Burney, E. D. Farmer and Sam. Davidson.

At present the Gulf, Texas & Western Railway's traffic reaches Fort Worth through trackage over the Weatherford, Mineral Wells & Northwestern Railway to Weatherford, Tex., and thence over the Texas & Pa-

cific Railway. The president of the first-named road is J. J. Jermyn of Scranton, Pa., and Ben B. Cain of Dallas, Tex., is vice-president and general manager. J. L. Lancaster of New Orleans, first vice-president of the Texas & Pacific, is president of the Weatherford line. A direct line to Fort Worth would afford the Gulf, Texas & Western opportunity to gain the advantages of direct connections with all the trunk lines entering there, which include the Rock Island, Santa Fe, Frisco, Southern Pacific, St. Louis Southwestern and other important roads.

### ROCK ISLAND REPORT SHOWS STRENGTH

**Net Operating Revenues Gain 19 Per Cent.—Many New Industries Established.**

The annual report of the Chicago Rock Island & Pacific Railway, which has just been issued in pamphlet form, shows that 73 new manufacturing and commercial establishments were located on the lines during the year ended June 30, 1916. Their approximate cost will total \$5,688,790. It is anticipated that they will give employment to 2924 men, and it is estimated that they will give the road about 25,235 carloads of freight annually, besides increasing the movement of less than carload freight. There were also 73 tracks built to serve private industries, 8 tracks were built to coal mines and 17 existing tracks were extended.

Reference to the use of the new bridge over the Mississippi at Memphis says that it will substantially reduce the charges for transporting traffic across the river. The bridge represents an investment of \$4,649,032. The money to pay for it was provided by the Chicago, Rock Island & Pacific, the St. Louis, Iron Mountain & Southern and the St. Louis Southwestern railroads, which jointly hold the stock (only \$10,200), by the issue of \$6,000,000 first mortgage bonds that mature March 1, 1964. These bonds are pledged as collateral for a loan of \$5,000,000 for three years, or until January, 1918.

Track elevation in Chicago is being continued, it having begun early in 1913. The elevation provides for five main line tracks and all bridges over streets and other railroads are of steel and concrete, as are all walls constructed in connection with this work. Over \$700,000 was expended on this improvement during the year, making up to date of the report a total of \$1,783,358. For general track improvement work and maintenance the purchase of 759 new motor cars for the use of section gangs has been approved, and they will be placed in service as soon as practicable. The purchase of 95 motor cars for bridge gangs has also been approved. All these motors will burn kerosene.

It is stated that new financing must be accomplished before a comprehensive program can be undertaken as to motive power and improvements to existing locomotives. In the meantime, the shops are being put into condition to do the work recommended at the lowest possible cost. The purchase and installation of cutting and welding devices and the purchase of additional tools and machinery has been approved.

There were received and placed in service during the year 4000 new steel underframe and steel superstructure box cars of 80,000 pounds capacity each. They cost \$3,422,551.

Considerable economy was accomplished with respect to freight loss and damage, the charge being but \$882,076, a decrease of \$403,023, or over 31 per cent. as compared with last year. It is said that this improvement was brought about by better equipment, better track, better freighthouse operation, better loading, better handling and better organization. Not only have 4000 new box cars been added to the equipment, but the old cars have been maintained in better repair, and the improved condition of locomotives has not only prevented freight delays, but it has avoided demoralization among employees incident to train service. The campaign of education begun prior to the receivership has become effective.

The property continues under the charge of Jacob M. Dickinson, receiver.

The income account displays the following results: Total railway operating revenues, \$75,346,967, increase \$4,390,077; total railway operating expenses \$54,543,132, increase \$1,021,517; net revenue from railway operations \$20,803,834, increase \$3,377,559, or over 19 per cent.; operating income after taxes and uncollectible

railway revenue \$17,204,725, increase \$3,164,830; total income \$18,611,067, increase \$3,203,256; balance of income after total deductions for fixed charges and rentals, hire of equipment, etc., \$2,957,281, increase \$3,691,958, for there was a deficit last year of \$734,676.

It is announced in New York that the various interests in the Rock Island properties have attained an agreement, and that the financial restoration of the company will be accomplished. These interests are represented by two stockholders' committees, and the committee representing the debenture bondholders. It is further said that the Reid-Moore interests will operate with them, and the plan will be underwritten by Speyer & Co. and Hayden, Stone & Co. It is expected that it will be announced very soon and will follow closely the lines of the tentative plan published several months ago.

### ATLANTA & ANDERSON RAILWAY.

**Charter Petition Filed for Plan in Which H. M. Atkinson Is Interested.**

A petition to charter the Atlanta & Anderson Railway Co. has been published at Decatur, Ga. This is the proposed electric railway in which H. M. Atkinson of Atlanta, chairman of the Georgia Railway & Power Co., and associates are interested, and, as previously published, the Atlanta & Anderson Construction Co. W. H. Wright, secretary, Gas and Electric Building, Atlanta, has been formed to build it. J. L. Murphy is the active representative of the promoters.

The charter petition says that they desire to incorporate for the purpose of operating an interurban railroad, the length of which will be about 140 miles, from Atlanta, Ga., to Anderson, S. C., of which about 121 miles will be in Georgia and 16 miles in South Carolina. It will probably be constructed through the following places, beginning at Atlanta, thus: Decatur, Chamblee, Doraville, Norcross, Duluth, Hoschton, Jefferson, Commerce, Royston and Hartwell, Ga., to Anderson. The Savannah River will probably be crossed near Brown's Ferry, about 6½ miles northeast from Hartwell.

It is also desired to obtain the right to build a line from Decatur via Lawrenceville, Ga., to Hoschton, Ga., about 50 miles, which would parallel the through line, although several miles to the south of it. From Decatur the tracks of the Georgia Railway & Electric Co. and the Georgia Railroad would be used to enter and leave Atlanta. The capital stock is to be \$10,628,600, in shares of \$100 each, equally divided between preferred and common stock.

The petitioners are J. L. Murphy, W. H. Wright, L. G. Mann, Paul D. Reid, W. A. Hammel, H. M. Milam, Ben K. Godfrey, T. J. Johnson, L. F. Wynne, Harry Flynn, W. J. Greene and S. A. Redding, all of Atlanta.

It is planned to connect with the Piedmont & Northern Railroad, the Duke electric interurban railway running from Anderson to Spartanburg, S. C., and also from Gastonia to Charlotte, N. C. A joint interurban station may be built at Anderson.

### TERMINAL ENLARGEMENT AT HAYNE, SOUTH CAROLINA.

**Southern Railway Will More Than Double Yard Capacity and Make Other Improvements.**

The Southern Railway announces that it will make important improvements to its facilities at Hayne, near Spartanburg, S. C. At this point its through route from Washington to Atlanta and from Charleston to Knoxville intersect, and the growth of traffic demands enlargement of the terminal. The yard will be increased in size from 761 to 1860 cars, and new facilities for handling locomotives will be installed.

The eastern end of the present receiving and classification yard will be rearranged so as to consist of 16 tracks with 940 cars capacity instead of the present 14 tracks with 527 cars capacity. The storage yard, now consisting of 3 tracks with 234 cars capacity, will be enlarged to 11 tracks with 920 cars capacity.

The engine-handling facilities will consist of a modern mechanical coaling plant of reinforced concrete construction, with capacity of 1000 tons in its bins and



## Good Roads and Streets

### SOUTHERN HIGHWAY ACTIVITIES.

**Details in regard to road and street undertakings and bond issues, briefly mentioned below, are given under the proper headings in our "Construction Department" and "New Securities," published elsewhere in this issue.**

#### Bonds Voted.

Corsicana, Tex.—Navarro county issued \$100,000 bonds for road construction.

Dallas, Tex.—Dallas county voted \$500,000 bonds to construct road bed.

Hattiesburg, Miss.—Forest county will issue \$150,000 bonds for road construction.

Paducah, Ky.—McCracken county voted \$200,000 bonds for road construction.

Pineville, Ky.—Bell county voted \$105,000 bonds to construct roads.

#### Bonds to Be Voted.

Palestine, Tex.—Anderson county will vote on \$25,000 bonds for road construction.

#### Contracts Awarded.

Baltimore, Md.—City awarded \$18,512 contract for street improvements.

Birmingham, Ala.—City awarded \$144,980 paving contracts.

Chattanooga, Tenn.—Hamilton county awarded \$37,181 contract for 3.5 miles of road.

Gadsden, Ala.—Etowah county awarded contract for 2 miles of road; cost \$10,000.

Jackson, Miss.—Hinds county awarded contracts for 30 miles of gravel roads; total cost \$51,000.

Jennings, La.—Jefferson Davis parish awarded contracts for 115 miles of highway; total estimated cost, \$300,000.

Madison, Fla.—City awarded contract for 4 miles of cement sidewalk.

#### Contracts to Be Awarded.

Ardmore, Okla.—Wirt Franklin and associates will expend \$400,000 for constructing toll road.

Augusta, Ga.—City plans \$18,000 expenditure for street paving.

Bay Minette, Ala.—Baldwin county will expend \$5000 for road improvements.

Corpus Christi, Tex.—City opened bids to construct 24,000 square yards paving and 15,670 linear feet curb and gutter.

Drumright, Okla.—City asks bids until November 20 for 34,500 square yards paving, 10,000 linear feet curb, 8000 cubic yards rock and 10,000 cubic yards excavation, etc.

Houston, Tex.—City will have \$25,637.05 for street paving.

Knoxville, Tenn.—City receives bids until November 20 for 9600 square yards paving and 3400 cubic yards grading.

Monroe, La.—Ouachita parish asks bids until December 18 to improve 68 miles of roads.

Oxford, Miss.—Lafayette county will construct 14 miles of sand-clay road.

#### Millions for Good Roads in Florida.

Jacksonville, Fla., November 8—[Special.]—During the years 1915 and 1916 it is estimated that at least 2500 miles of Florida roads have been surfaced, bringing the total of hard-surfaced roads up to more than 5500 miles. In addition to these, it is estimated that approximately 2000 miles of roads have been graded and drained during the same period, which, added to that class of roads in existence at the beginning of 1915, will bring the total up to approximately 10,000 miles of good roads.

The approximate amount of money expended on Florida roads up to 1916 is estimated at \$13,000,000. The total amount of bond issues for road improvement, according to the Government estimates, was \$7,562,000

for the year 1916, and at least \$10,000,000 will be spent on building permanent roads within the next two years. In addition to the money from road-improvement bonds the various counties as a whole will raise from direct taxation for road purposes (to be expended principally for maintenance) approximately \$2,000,000 per annum, or \$4,000,000 for the two years. This means that the counties of Florida, independently of what the State may do, will expend at least \$14,000,000 on roads during the years 1917 and 1918, and this does not include the interest on the bonds and the sinking fund, both of which must be provided by requirement of law.

Then comes the Federal aid money for roads, every dollar of which must be matched by the State or the counties in which the moneys are to be expended on public roads. Florida's share of the Federal aid fund for the five-year period ending June 30, 1921, will amount to approximately \$840,000, and as an equal amount must be expended by the State (or counties), this means an additional \$1,680,000 for road improvement.

Florida's total mileage of roads is 17,843 miles, with a total mileage of 6872 miles of brick, asphalt, sand-clay, concrete or other material of like character. The State road department has already tentatively agreed upon the main system of highways to be improved with Federal aid funds supplemented by an equal amount from the counties this year and by an equal amount by the State for the following four years.

#### American Road Builders Elect Officials.

At the annual meeting of the American Road Builders' Association, recently held in New York city, the following officers were elected:

President, Arthur W. Dean, chief engineer Massachusetts State Highway Commission; first vice-president, William H. Connell, chief Bureau of Highways and Street Cleaning, Philadelphia, Pa.; second vice-president, Austin B. Fletcher, State highway engineer of California; third vice-president, Arthur H. Blanchard, professor of highway engineering, Columbia University, New York; secretary, E. L. Powers, editor of Good Roads; treasurer, W. W. Crosby, consulting engineer, Baltimore, Md.; directors for three years, T. R. Agg, professor of highway engineering, Iowa State College, Ames, Iowa; W. E. Atkinson, State highway engineer of Louisiana; Fred E. Ellis, manager Essex Trap Rock & Construction Co., Peabody, Mass.; R. H. Gillespie, chief engineer of sewers and highways, Borough of the Bronx, New York city; B. Michaud, deputy minister, Department of Roads, Province of Quebec, Canada; Paul D. Sargent, chief engineer Maine State Highway Commission.

#### Resurfacing a Mississippi Road With Asphaltic Concrete.

The Board of County Commissioners of Le Flore county, Mississippi, has just awarded contracts to the Memphis Asphalt & Paving Co., Memphis, Tenn., for the reconstruction of a five-mile stretch of clay-gravel road into an asphaltic road resurfaced with asphaltic concrete. This permanent type of asphalt road construction was determined upon because automobile traffic has become quite heavy on the Le Flore county roads, owing to the rapid development of the famous Delta country and the fact that the clay-gravel roads were unable to withstand the traffic.

Some of the other roads will be given a surface treatment of liquid asphalt, which is a form of maintenance adopted for lighter traffic roads. The contract for this work was awarded the Kane-Kelly Construction Co. of New Orleans, La.

#### Florida's First Motor Camp Established at New Port Richey.

New Port Richey, located on the Dixie Highway, Old Spanish Trail and Paradise Loop, is the first town in Florida to establish a motor camp. Here is not only a delightful camp in a park of palm trees, alongside the Cootee River, but there is a fireplace and comfort station for men and women, and a community building where the motorists can gather at night for relaxation and entertainment. Good drinking water is provided,

and it is pronounced an ideal camp. The motorists are welcome for a day or a week or a season.

The idea is that of the New Port Richey Board of Trade, and the ladies of the Woman's Civic Club have entered into the spirit of entertaining those "who pass in the night" by acting as hosts to the ladies.

It is hoped that the motor camp will be prevalent all over the State, as it is in the West.

More than 200 cars have been checked through New Port Richey this fall, bound for St. Petersburg, Clearwater, Tarpon Springs, Tampa, Manatee county and parts farther South in the State, and it is expected that more than 1500 cars from the North will pass through before the new year.

Two bad stretches of sand, one at Floral City and the other between Brooksville and Aripeka, will be repaired shortly, and then it will be clear sailing from Madison, Fla., to any point in South Florida via Lake City, High Springs, Gainesville, Ocala, Brooksville, New Port Richey, Tarpon Springs, etc.

#### Street Improvements to Cost \$144,980.

The city of Birmingham, Ala., has awarded three street-improvement contracts totaling \$144,980. These awards call for sheet asphalt paving, granite curbing, etc., on various avenues. They were awarded to the Dunn Construction Co. of Birmingham.

#### Road Bonds for \$200,000.

McCracken county, Kentucky, has voted \$200,000 bonds for road construction, and the county commissioners, offices at Paducah, will make early arrangements for issuance. This will be followed by the preparation of plans for the contemplated highway construction.

#### \$800,000 Bonds for Roads.

Bonds for the amount of \$800,000 have been voted for highway construction in Okmulgee county, Oklahoma. The county commissioners, offices at Okmulgee, will make early arrangements for issuing these bonds and for planning the roads to be built.

#### 115 Miles of Highway Ordered.

Contracts have been awarded for constructing 115 miles of highway in Jefferson Davis parish, Louisiana. These contracts include bridges, culverts and accompanying facilities. The total estimated cost is \$300,000.

#### Bonds for \$500,000 Road Construction.

Bonds to the amount of \$500,000 have been voted for issuance by the Dallas County Commissioners, Dallas, Tex. These bonds are to provide funds for constructing permanent roadbeds in overflow districts.

#### Bids for 68 Miles of Highway.

The Ouachita Parish Supervisors, Monroe, La., have accepted plans for grading, surfacing and draining 68 miles of roads. Bids for this construction are invited until December 18.

#### \$400,000 Toll Road Company.

A \$400,000 company is being organized at Ardmore, Okla., for the purpose of constructing toll roads from Ardmore to three oil fields in Carter county. Wirt Franklin is among those interested.

#### Madrid Wants Abattoir Equipment.

UNITED STATES EMBASSY, THOMAS HINKLEY, Second Secretary of Embassy, Madrid, Spain.

The municipality of Madrid contemplates equipping at a cost of \$300,000, a municipal abattoir already constructed.

November 16, 1916.]

## MANUFACTURERS RECORD.

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**LUMBER**

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

**Uniting Lumbermen for National Campaign of Advertising and Trade Extension.**

A party of Eastern lumber manufacturers is making a tour of the West to urge larger appropriations for national advertising of lumber and wider promotion of the use of lumber where wood is best for construction. With lumber prices at the mill today lower by 10 per cent. than was the case 10 years ago, the lumbermen realize that something must be done to save the lumber industry and the forests of the nation. With prices low, the lumbermen are cutting only the cream of the forest, leaving as a tremendous waste the portions of the tree which do not return a ready profit.

Advertising and trade extension is recognized as the only solution of this problem, and the Easterners who have been trying to solve the problem at home are going West to tell what success has been achieved and to get the advice of the Westerners, who have proved that they are adepts in solving problems of the industry. The party planned to spend two days each in Spokane, Seattle, Tacoma, Portland and San Francisco.

The lumbermen in the party include President R. H. Downman of New Orleans, of the National Lumber Manufacturers' Association; President C. S. Keith of Kansas City, of the Southern Pine Association; R. B. Goodman of Goodman, Wis., head of the hemlock promotion campaign of the Northern States, and A. R. Turnbull of Norfolk, Va., president of the North Carolina Pine Association.

**Southern Pine Mills Organized for Export Trade.**

New Orleans, La., November 9—[Special.]—Of great importance to the lumber industry was the formation here of the Yellow Pine Export Lumber Co., organized for the purpose of extending the American lumber markets in Europe and South America.

The company will have a large capital, and will include the largest yellow pine mills in the South, assuring its undoubted success. Through the co-operation of all of the mills of the company a lumber order of any size will be handled with little trouble by the mills as a collective group. The loss of any one mill will have no effect upon the balance of the mills in completing an order.

It is the intention of the new company to send special agents to Europe and South America following the declaration of peace abroad to obtain new business for its mills. Assurance is given that orders will be filled with full counts and straight grades, and prompt delivery will be made.

**Daily Capacity 100,000 Feet of Lumber.**

By January the Wilderness Lumber Co. will begin operating its Nallen (W. Va.) double band mill with daily capacity 100,000 feet of hardwood lumber. This plant is being built at a cost of \$200,000, including \$75,000 for band mills, engines, dynamos, etc. All the machinery has been purchased and is now being installed under the direction of W. E. Morenus of Marathon, N. Y., the engineer in charge. The company's officers include Peter Carroll, president and manager, Charleston, W. Va.; A. Bringardner, vice-president, Columbus, O.; J. I. Nallen, secretary, Nallen, W. Va.

**Improvements in Turpentining.**

Madison, Wis., November 13—[Special.]—Turpentining without a smell, and other developments, some in the field in the South are announced by the Forest Products Laboratory, as follows:

Experiments on different methods of making the streaks in turpentining trees are being conducted at Columbia, Miss. The results so far secured indicate that the double narrow chipping is 27 per cent. ahead

of the standard chipping in yield, while the height of the face is about the same. The single narrow chipping is 20 per cent. below the standard in yield.

Mr. Kressman was able to produce an odorless turpentine from the sulphate turpentine obtained as a by-product in the manufacture of sulphate pulp at Orange, Texas.

One hundred of the red oak ties which were created under laboratory supervision for the Rockford & Interurban Railway Co., Rockford, Ill., were laid during the month. These ties, together with 100 untreated hemlock test ties, are being laid in a street in which concrete construction is used. The street will be paved with brick when the track is finished.

as managing director. Branch offices will be established in Copenhagen. Our New York office is in charge of Ingvar Tokstad, president of Normanna Company, Inc., 117 E. 18th street, New York, secretary of Norwegian-American Chamber of Commerce at New York. I will be general manager of agencies, and all agencies will be under my supervision. I will travel through the various countries working in connection with our branch offices. Two of our representatives now on the way to America to purchase goods and study conditions over there. I intend to take a trip over some time in January or February.

**Manufactures Needed at Smyrna.**

JULES EGLI, Smyrna, Turkey.

"Call attention of manufacturers to the benefit they will derive from preparing themselves for the heavy demand for merchandise after the war. Imports—Above all, cotton textures, cabots, drillings, white and colored, printed and made of colored yarns, etc.; also manufacturers of iron, iron tubing of all kinds, nails, tacks, iron wire, etc., will present great opportunities. Exports—In this line it will be necessary to prepare in advance. Among goods suitable for export can be cited dried raisins, figs, gum tragacanth, opium, wines, nut-galls, goat skins, lamb skins, tobacco, yellow dyes. I shall serve dealers for a modest commission. Industries to be created—In consequence of increase in custom duties, all kinds of manufactures will without doubt have a great future before them; at present there are no manufacturers of consequence. I shall be at the service of those who feel interested. Oil of rose, one of the most important manufactures of our country, desires to find a market in America; product of finest quality; make that fact known to purchasers, to whom I shall be glad to send samples."

**TEXTILES****Meritas Mills' Addition.**

Final plans have been decided upon for the Meritas Mills' addition (noted last week) at Columbus, Ga. They provide for a 284x130-foot slow-burning mill-construction addition costing \$75,000, and the contract has been awarded to T. C. Thompson & Bros. of Charlotte, N. C. The installation of machinery will be 350 wide looms, with the electric power drive, for a daily capacity of 25,000 yards of cotton cloth for conversion into oilcloth.

**Textile Notes.**

The Seminole Cotton Mills, Gastonia, N. C., has increased capital stock from \$125,000 to \$300,000.

Machinery for knitting hosiery and underwear will be installed by the Opelika Overall Co. of Opelika, Ala.

The Manchester Cotton Mill, Rock Hill, S. C., will build 80x40-foot dyehouse of brick construction, with cement floor, costing \$4000.

W. W. Baird, J. M. Senter, J. T. Warmath and associates have incorporated the Avondale Cotton Mills Co. of Humboldt, Tenn., with a capitalization of \$100,000.

John C. Rankin and W. T. Love of Lowell, N. C., and C. M. Dunn of Gastonia, N. C., have incorporated the Rando Manufacturing Co. with an authorized capital of \$500,000.

W. G. Reynolds, J. W. Smith, T. J. Patrick and S. W. Patrick of Gastonia, N. C., will establish a cotton-yarn mill with 2000-spindle equipment. The machinery has been ordered.

W. B. Davis & Co., Attalla and Fort Payne, Ala., and Chattanooga, Tenn., will, it is reported, establish a branch mill with an equipment of 100 knitting machines at Gadsden, Ala.

The Magnet Knitting Mills' increase of capital (noted last week) from \$100,000 to \$200,000 is a part of the company's plan to increase daily production from 800 to 2000 dozen pairs of hose by the additions heretofore detailed. This plant is located at Clinton, Tenn.

The Christine (Tex.) Silk Farm & Manufacturing Co., lately noted incorporated with \$5000 capital, will plant 20 acres in mulberry trees, but has not decided any further plans. Officers are as follows: John Hinton, president; W. H. Potter, vice-president; J. B. Youngblood, secretary; E. M. Johnson, treasurer.

**FOREIGN NEEDS****For Norway, Sweden, Denmark and Russia.**

GEORGE SCHOW, Øvre Slottsgate 7, Christiana, Norway.

I have consolidated my Russian and Scandinavian interests with A. S. Necto, Northern Engineering & Trading Co. We are increasing capital to 1,500,000 crowns. Our president will be Halfdan Steen-Hansen. F. Merch-Reiersen, Jr., will be managing director of Norwegian office. We are opening a branch in Petrograd, in charge of Fedor Andrejevitch Bystrom, and Moscow and Samara, in charge of Kort Kopke. We have also a branch in Stockholm, with Erik Cronvall

**Yarn Spinning Mill Wanted.**

EMPRESA DE HILADOS, Gabriel A. Pinado, Managing Director, Barranquilla, Colombia, S. A.

"We have established a company for manufacturing hosiery yarns. We intend to mount a plant with daily capacity of 2000 pounds. We wish proposals for machinery completely installed and running, we attending here to the inland freight and custom-house duties. The buildings will be erected according to plans and specifications sent by the firm selling the machinery. All this at our own expense. A part of the value of the machinery is to be paid on placing the order and the balance when the machinery is fully mounted and running. We pay the salary of the engineer who is to make the installation or mounting of the machinery. A certified letter of credit will be opened for the balance of the value of the machinery, which is to be paid when fully mounted."

**For Russian Representation.**

H. CIERINSKI, Was. Ostr., 12 Ligne No. 65, Petrograd, Russia.

"I am fully acquainted with our market, so that I could be of assistance to firms trading in woolen, silk or textile goods, knitted or mercery goods, cotton, woolen, leather, shoes and other manufactures. I work usually on commission. I have been the representative of firms which were desirous to develop their trade with Russia. Accept my thanks and be so kind not to lose sight of me and to recommend me to those firms which are desirous to have their own representative in Russia."

**Boiler Wanted for Guadalupe.**

ANDRE BOU, Pointe-a-Pitre, Guadalupe.

I am desirous also of getting proposals, with price, and, above all, date of delivery, for horizontal tubular return flame boiler with 300 square meters heating surface, together with accessories such as check damper (register); grill firedoors; fire armature; safety reserve clock; valve; direct and indirect steam outlet (one for escape); boiler built to operate with refuse (a bagasse); gratings, armature and doors adapted to that system of furnace; mean steam pressure adapted to be 5 kilos per cubic centimeter.

## MECHANICAL

Illustrations and descriptions having news value pertaining to developments in machinery, mechanical devices and inventions will be considered for use in this department.

### An Unusual Structure.

The accompanying photograph illustrates a large elevated water storage tank built for the Campbell Flour Mills Co., Ltd., of Toronto, Ontario. The flouring mills were recently equipped with an automatic sprinkler system to provide fire protection and reduce insurance



rates. The tank is used for the storage of water necessary to operate the sprinkler equipment satisfactorily.

Great height and the prominent position of the structure render it peculiarly effective for advertising purposes, and the company has taken advantage of this fact in having the tank built in replica of a bag of flour. The tank is entirely of steel, which material may be readily formed to the shape desired and at the same time insures strength and long life.

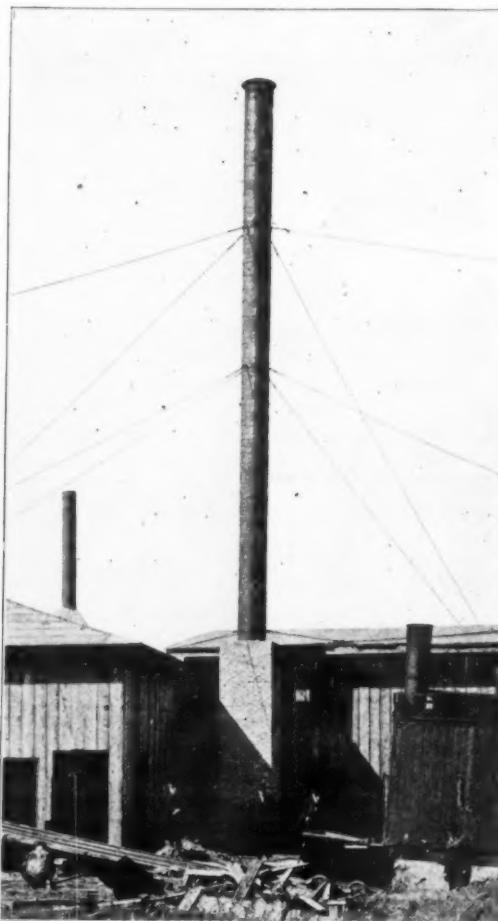
Some idea of the size of the water tower may be gathered from the following data:

The tank holds 40,000 gallons of water. Total height of the structure is 152 feet above foundations, and the tank itself is 37 feet deep and 18 feet wide, being built oval in cross-section to correspond truly to the shape of a flour sack. The weight supported is over 200 tons.

The work was designed and executed by the Chicago Bridge & Iron Works of Chicago, which makes a specialty of this class of construction. This company also recently constructed in the city of Toronto for the City Dairy Co. a similar structure having a tank in the shape of a milk bottle.

### Standard Reinforced Spiral Pipe Stacks.

Something new in the way of a smokestack is said to have been made and erected for the city of Chicago by the Standard Spiral Pipe Works, Chicago, manufacturer of reinforced spiral steel pipe. The stack consists of Standard reinforced spiral pipe 50 feet long



REINFORCED SPIRAL PIPE STACK.

in one piece, and it is claimed to be exceptionally strong and of light weight. The larger of the accompanying illustrations shows the stack erected in place and the

smaller one shows a section of the pipe seam and the manner in which it is securely fastened.

For its own use, the company made up and erected two 20-inch stacks. It is said they were given a severe



SEAM OF STANDARD REINFORCED SPIRAL PIPE.

test not long ago when a windstorm passed over the section of the city where the stacks are located, as all the other stacks in the neighborhood having two to four sets of guys of the same length, telegraph poles, trolley wires, etc., were blown down, while the spiral pipe stacks were not affected in the least.

### For French Import and Export.

BARLES JEUNE, Director, Le Trait d'Union Commercial & Industrial Francais, 23 Rue du Temple, Paris, France.

"This commercial manufacturing corporation has the object of establishing and developing the business of exporting and importing merchandise. Experience and extensive mercantile connections enable us to execute all commands under the best conditions and terms. Inquirers and clients will kindly furnish references and enclose postage for replies."

### Practical Cotton Mill Man Wanted.

R. G. HARRISON, Cashier Farmers and Merchants' Bank, Williamston, N. C.

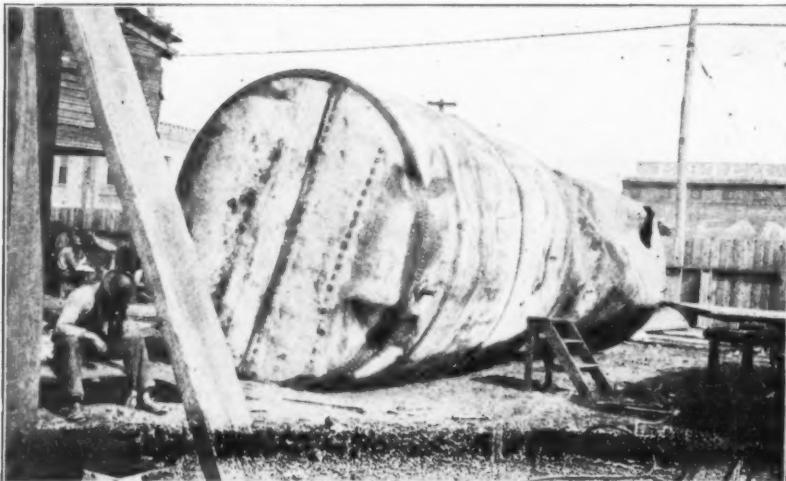
Our people want to build a cotton mill, but we need a practical cotton mill man to join us. We wish a man of ability, with some capital to put in the company to show good faith. Anyone interested will please communicate with me.

### Fire-Damaged Oil Tanks Rebuilt.

An interesting instance of difficult repair work well done—what might be called a triumph in mechanical engineering—was the recent restoration by the Johnson & Barry Steel Co., North Birmingham, Ala., of 12 large oil tanks, 30 feet long and 10 feet in diameter, belonging to the Texas Oil Co., to their former state of usefulness. These tanks were a mass of burned and melted iron, full of great holes, caused by various explosions during a recent fire. With a "Chicago Pneumatic" Boyer hammer, the tanks were completely cut apart and straightened out. All rivets were removed by Boyer rivet busters, and the plates were riveted with Boyer riveting hammers. New iron was used, of course, to mend holes blown by the explosives. Little Giant air drills were also used on this job, and a "Chicago Pneumatic" compressor supplied all the air used.

Little Giant and Boyer tools are manufactured by the Chicago Pneumatic Tool Co., Chicago.

The attached "before" and "after" photographs will illustrate what a difficult task it was and how successfully it was completed.



TANKS BEFORE REPAIRS WERE MADE.



TANKS AFTER REPAIRS WERE MADE.

# Construction Department

## IN ORDER TO FOLLOW UP

**Properly the Construction Department items, please bear in mind the following statements:**

### EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

### HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be written on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the post-office will generally be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur, as our reports are often published before new companies are known and before they have any established office for the receipt of mail.

### WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

**In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.**

### DAILY BULLETIN

**The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year.**

**All advertising contracts in the Manufacturers Record for three months or longer include a subscription to the Daily Bulletin for the contract period, as well as a subscription to the Manufacturers Record.**

### BRIDGES, CULVERTS, VIADUCTS

Ala., Florence.—Lauderdale County will construct bridge over Little Cypress Creek near Sharp's Mill and one over Second Creek at Sledge Ford; County Commiss., J. F. Koonce, Judge of Probate, receives bids until Dec. 10. (See Machinery Wanted—Bridge Construction.)

Ala., Gadsden.—Etowah County will construct concrete arch bridge of one 60-ft. span across Black Creek; expenditure \$2800; S. J. Cumming, County Engr.; lately noted. (See Machinery Wanted—Bridge Construction.)

Ala., Montgomery.—Montgomery County voted bonds to construct bridge across Tallapoosa River at Judkin's Ferry; concrete; estimated cost \$50,000. (Lately noted to be built by Montgomery and Elmore Counties.)

Ky., Richmond.—Madison County votes Dec. 7 on \$35,000 bonds toward construction of bridge across Kentucky River to be built in conjunction with Fayette County. (Noted in August under Ky., Lexington.)

La., Des Allemands.—Highway Dept., Board of State Engrs., Room 104 New Orleans Court Bldg., New Orleans, invites bids until Dec. 4 to construct steel swing-bridge across Bayou Des Allemands near Des Allemands; W. E. Atkinson, State Highway Engr., New Orleans. (See Machinery Wanted—Bridge Construction.)

Mo., Kansas City.—Board of Public Works let contract Paul Hartung, Kansas City, to construct reinforced concrete bridge over Raytown Rd. at Shuttle Creek; cost \$3600.

N. C., Charlotte.—Mecklenburg County Commiss. let contract Virginia Bridge & Iron Co., Roanoke, Va., at \$23,171 to construct bridge over Catawba River at Betty's Ford; main bridge to consist of 2 spans of 230 ft. in length on concrete piers; approach from Mecklenburg county to be clear span of 100 ft.; Lincoln county approach to be span of 100 ft. with 120 ft. of steel trestle. (Lately invited bids.)

Ola., Cherokee.—Alfalfa County voted on \$100,000 bonds to construct bridges.

Ola., Pawhuska.—Commiss., J. M. Buckley, Commr. Streets and Public Property, will construct reinforced concrete bridge

across Bird Creek; length 510 ft.; 100-ft. main span and twenty 20-ft. spans; replaces old steel bridge; bids until Dec. 4. (See Machinery Wanted—Bridge.)

Ola., Tulsa.—City Commiss. let contract Jos. Langtry of Tulsa at \$31,082 to construct approaches to bridge over Arkansas River, between Tulsa and West Tulsa; specifications for approaches call for 5500 sq. yds. Trinidad Lake asphalt; same amount of lithomistic pavement, including concrete base; 17,000 cu. yds. earth for embankment; 1000 sq. yds. surface limestone riprap; 1100 sq. ft. concrete sidewalks; 3150 lin. ft. concrete curbing, etc.; total cost of bridge and approaches \$200,000, including cost of portion of right-of-way.

S. C., York.—York County contemplates rebuilding bridge across Catawba River, in Fort Mill Township; former structure destroyed by flood.

Tex., Dallas.—Northern Texas Traction Co., Mark Lowd, Ch. Engr., will construct double-track steel and concrete bridge over Trinity River, to be part of steel and concrete viaduct which will span Trinity River bottoms from Union Station to Oak Cliff; estimated cost of extension, \$300,000; portion of permanent viaduct was completed last summer by interurban company at cost of \$110,000, permitting street cars and interurbans to cross at separate grades.

Tex., Gainesville.—F. D. Henderson, Secy. Chamber of Commerce, advises that committee is considering erection of bridge to cost \$50,000 to \$60,000; type of construction and materials not decided; now consulting engineers; desire data and suggestions. (See Machinery Wanted—Bridge Construction.)

Tex., Waco.—City voted \$25,000 bonds to construct bridges and culverts. Address The Mayor. (Noted in October.)

Va., Abingdon.—Holston River Lumber Co., H. T. Ballah, Ch. Engr., contemplates constructing 200-ft. steel bridge.

W. Va., New Martinsville.—Wetzel County will construct concrete bridge across Willey Fork of North Fork of Fishing Creek, about one-half mi. above Kingtown, Grant Dist.; bids until Nov. 17; S. Myers, Clerk County Commiss.; supersedes recent item. (See Machinery Wanted—Bridge Construction.)

### CANNING AND PACKING PLANTS

Ala., Prichard.—People's Canning Factory, capital \$8000, Incptd. with E. L. Harper, Prest., Mobile; W. W. Jones, V.P., Prichard, Ala.; P. E. Stanton, Secy., Canoe, Ala.; establish cannery with daily capacity 10,000 cans for first year; may increase to 20,000 cans; erect building 50x100 ft.; wood; concrete floor; additional room for boiler and engine house.

Md., Baltimore.—Seaboard Packing Co. organized; Howard R. Smith, Prest., Pennsylvania and Fulton Aves.; Wm. C. Snyder, V.P.; Wm. A. Applewhite, Geo. W. Atkinson, Samuel E. Egerton and others, directors; plans to buy Jones & Lamb Co.; also to build meat-packing plant to cost \$200,000; C. B. Comstock, Archt., New York. (Lately noted Incptd. with \$800,000 capital.)

N. C., Wilmington.—G. Herbert Smith (V.P. Acme Fertilizer Co.) and Walter Griffith of Omaha, Neb., contemplate building packing plant on Cape Fear River; 400 to 500 acres available, which will afford space for stockyards and future extensions.

Tenn., White Pine.—Davis, Dougherty & Pearson will establish cannery; 40x150 ft.; daily capacity 2 carloads of canned tomatoes, corn, etc.

Tex., Bay City.—Matagorda County Marketing Assn. let contract for sweet-potato curing plant; 36x60 ft.; capacity 10,000 bus.

Va., Newport News.—O. A. Bloxom of Battery Park, Va., contemplates building oyster-packing house and marine railway at boat harbor.

Va., Norfolk.—Walter Sharp interested in establishment of packing plant; estimated cost \$200,000; daily capacity 500 hogs and 75 head of cattle and sheep.

Va., Norfolk.—J. J. McPherson Packing & Ice Co., capital \$300,000, chartered; J. J. McPherson, Prest.; W. L. Renn, Secy.; acquired plant of Arctic Ice Co. on Mason Ave., Brambleton, and will improve; operate packing plant; manufacture ice and ice-cream.

### CLAYWORKING PLANTS

Tex., Abilene.—Bricks.—Ed and Steve Powers, Hamby, Tex., purchased (from Guaranty Trust Co.) Abilene Press Brick Works; will construct new kiln and make other improvements.

W. Va., Bluefield.—Brick and Sewer Pipe.—Bluefield Shale Brick Co., capital \$30,000, being organized by J. K. Burgess, Graham, Va., to manufacture shale brick and sewer pipe.

### COAL MINES AND COKE OVENS

Ky., Emanuel.—Turner Jellico Coal Co., capital \$5000, Incptd. by Jesse Turner, Grant Mason and J. D. Turner.

Ky., Comargo.—Comargo Coal Co., Knoxville, Tenn., Incptd. with \$50,000 capital to develop mines; daily output 500 to 600 tons coal.

Ky., Fleming.—Detroit-Elk Coal Co., capital \$30,000, organized with S. L. Bastin, Mgr., Kona, Ky.; will develop coal mines near Fleming.

Ola., Tulsa.—Fargo Contracting Co., Mayo Bldg., purchased Mohawk coal mine, 6 mi. from Tulsa; advises Manufacturers Record: 1000 acres; purchase price \$50,000; daily capacity 250 tons; will install plant to have daily capacity 750 tons; estimated cost of equipment \$30,000; stripping with steam shovel; W. F. Garretson, Mgr. (Previously noted.)

Tenn., Jellico.—Evans-Jellico Coal Co., capital \$12,000, Incptd. by David Reynolds, S. W. McComb, T. L. Gannon and others.

W. Va., Alkali.—West Virginia White Ash Coal Co., Huntington, W. Va., capital \$100,000, Incptd.; L. R. Reese, Prest.; Geo. S. Wallace, Secy.-Treas.; operate mines with daily capacity 500 tons coal. (See Machinery Wanted—Mining (Coal) Machinery.)

W. Va., Elm Grove.—Elm Grove Coal Co. sold to J. A. Paisley, Prest. Valley Camp Coal Co., and associates; Mr. Paisley advises Manufacturers Record: Purchased this property of about 4500 acres Pittsburgh coal; expect to rehabilitate present opening and install larger one; equip for daily output about 3000 tons coal.

### COTTON COMPRESSES AND GINS

Tex., Stephenville.—A. L. Ward contemplates rebuilding cotton gin burned at loss of \$10,000.

### COTTONSEED-OIL MILLS

Tenn., Memphis.—Poe Cottonseed Products Co. (lately incorrectly noted as "Producing" Co.), Falls Bldg., 24 N. Front St., Incptd., capital \$10,000 to handle cottonseed and peanut oil on brokerage basis, buyers on commission, etc., and to deal in cottonseed meal and hulls; H. T. Poe, Jr., Prest.-Mgr.; W. W. Swift, V.P.; Robt. Wilson, Secy. (Supersedes recent item.)

### DRAINAGE SYSTEMS

Fla., Espanola.—J. M. Parkhill of Kansas City, Mo. and Peoria, Ill., and associates, acquired land in St. John's County and plans platting and draining preparatory to development for agriculture; proposes drainage district of 16,000 acres.

### ELECTRIC PLANTS

Ark., Little Rock.—Prairie Light & Development Co., capital \$500,000, Incptd. by S. R. Morgan of Little Rock, J. R. Perkins of St. Louis and R. O. Lehn of Chicago; primary purpose is to furnish electric power for cotton gins, rice mills and rice pumping plants; plans to construct transmission systems to furnish electric light and power from Little Rock to Lonoke, Carlisle, Hazen, Devall Bluff and vicinity; later other lines will probably be constructed to Benton, Conway and England; local lines for lighting will be constructed in cities; purchase electric power from Little Rock Railway & Electric Co.

Fla., Lake Butler.—City, B. M. Wilson, Mayor, voted \$10,000 bonds for electric lights. (Noted in October.)

Fla., New Smyrna.—City contemplates construction electric street-lighting system. Address The Mayor.

Ky., Lexington.—Kentucky Traction & Terminal Co. will install 4000 K. W. turbine generator in power-house to supplement two 2500 K. W. generators previously installed.

Ky., Murray.—City voted \$20,000 bonds to build or purchase electric-light plant to supply light and power to city and surrounding county. Address The Mayor. (Lately noted.)

Ky., Olive Hill.—City voted \$10,000 bonds to construct electric-light plant and water-works. H. G. Hicks, Mayor.

Miss., Columbus.—City contemplates voting on \$50,000 bonds to construct electric-light plant. Address The Mayor.

Mo., Kansas City.—Kansas City Light & Power Co. will build power plant costing probably \$3,000,000; having plans prepared; John H. Lucas, Prest., wires Manufacturers Record: Can not give any information at present.

N. C., Burlington.—Piedmont Railway & Electric Co. contemplates constructing electric transmission system to Elon College and Gibsonville, 8 mi.; now constructing 2-mi. transmission system to Hopedale Mills.

Ola., Durant.—North American Light & Power Co., W. A. Boehr, Prest., 122 S. Michigan Ave., Chicago, is having plans prepared for electric-light system and ice storage plant to cost \$18,000.

Ola., Mountain Park.—City may issue \$4500 bonds for electric-light system; date of election Nov. 14. Address The Mayor.

Ola., Stroud.—City, W. A. Hadley, official in charge, will improve light plant, changing from D. C. to A. C. (See Water-works.)

S. C., Chesnee.—Geo. Blackwell let contract C. S. Ballard to construct electric-light plant.

Tex., Bertram.—Elias Allen is interested in plan to construct electric-light and power plant.

Tex., De Kalb.—Louis H. Fuller of Houston is considering establishment of electric-light and power plant.

Tex., Galveston.—Galveston Electric Co. will install 300 K. W. motor generator.

Tex., Richmond.—City will install condenser at city electric plant; has let contract at \$4723; E. W. Trafford, Supt.

**In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.**

**FERTILIZER FACTORIES**

Fla., Campbellton.—E. A. Hinson will install lime-rock crusher; crushed lime to be used in preparing land for peanuts.

Va., Norfolk.—F. S. Royster Guano Co. let contract to W. T. Gregory to erect 1-story addition to Royster building for chemical laboratory; cost \$9000; fireproof; metal roof; concrete floor; extend present heating plant; plans by Ferguson, Calrow & Wrenn, Virginia National Bank Bldg., Norfolk. (Noted in Sept.)

**FLOUR, FEED AND MEAL MILLS**

Fla., Jacksonville.—Dixie Milling Co. will be incptd.; J. E. Browne, Prest. and Mgr.; E. R. Gelger, V.-P. and Treas.; J. C. Herndone, Secy.; will reconstruct brick building; install flour blending and mixing plant, feed mill, etc., to cost about \$10,000; daily capacity 500 bbls. plain and self-rising flour and 45 tons dairy and mill feeds.

Ga., Athens.—Company organized by E. M. Howell (Secy.) Webb-Crawford Wholesale Grocery Co.), J. Van Straaten and W. J. Barrett; will build corn mill.

Ga., Jackson.—J. T. Moore, Mayor, is interested in plan to build flour mill.

Okla., Enid.—Enid Milling Co., capital \$200,000, incptd. by Henry Schaffer of El Reno, J. W. Maney and John Maney of Oklahoma City.

Va., Roanoke.—Lindsey, Robinson & Co. will build mill and warehouse; brick; 80x140 ft.; 4 stories; will buy materials and build by day labor, under superintendence; install corn meal machinery, feed mixers, etc., cost about \$7500; daily capacity 1000 bu. meal, 25 tons feed.

W. Va., Fairmont.—Fairmont Grain & Milling Co., capital \$60,000, incptd. by M. A. Rowe, J. F. Hare, G. J. Jackson and others.

**FOUNDRY AND MACHINE PLANTS**

D. C., Washington—Machine Shop.—Government let contract Davis Construction Co., 602-603 Union Trust Bldg., Washington, at about \$200,000 to erect reinforced concrete factory building for United States Department equipment shops at Fifth and W Sts. N. E., and to W. G. Cornell Co., 617-618 Southern Bldg., Washington, at about \$32,000 for mechanical equipment to include plumbing, heating apparatus, electric conduits and wiring, interior lighting fixtures, fire-alarm system, ash lift and elevator cars and machinery; provision to be made for manufacture of mail pouches, bags, locks and other attachments; annual capacity about 1,000,000 bags. (Lately noted inviting bids.)

Ky., Louisville.—Plows.—B. F. Avery & Sons increased capital from \$1,500,000 to \$2,000,000; wires Manufacturers Record: Issuing \$500,000 additional first preferred 7 per cent. stock for convenient handling of increasing business; plant is new and complete; no enlargement contemplated.

La., New Orleans—Steel Cars.—H. L. McLean of Algiers Ry. & Light Co. and Mr. Badeau of Allis-Chalmers Mfg. Co. plan to build steel car works. (Supersedes recent item mentioning Southern Car Co. of High Point, N. C.)

Mo., St. Louis—Iron Works.—Central Iron Co. will build shearing plant; has site 70x150 ft.

Mo., St. Louis—Steel Forgings.—Fulton Iron Works writes to Manufacturers Record. We are interested in proposition pending for construction of forge plant; entirely independent corporation; we, as largest users of forgings, will no doubt be interested in it. (Fulton Company lately reported to build \$50,000 addition to produce steel forgings.)

Mo., St. Louis—Machinery.—F. C. Schwander Machinery Supply Co., lately noted incptd., capital \$10,000, succeeds F. C. Schwander & Co., sellers and erectors of boilers, engines and steam specialties; does not conduct foundry or machine shop.

Tenn., Chattanooga—Machine Shop.—City, E. A. Welge, Secy. Com. Fire and Police, let contract to J. M. Potts to erect 65x40-ft. brick-and-shop-construction machine shop for city motors and apparatus; equipment plans not yet made.

Tex., Cameron—Blacksmith and Machine Shop.—Frank Michatka will build blacksmith and machine shop; 60x105 ft.; brick.

**GAS AND OIL ENTERPRISES**

Ark., Fort Smith—Oil Refinery.—Arkansas Refining Co. reorganized; will enlarge plant and increase present capacity of 235 bbls.;

Alex. Calvert and Chas. C. Ditto of Bartlesville will be in charge.

Ky., Lexington.—Crescent Oil, Gas & Gasoline Development Corp., capital \$60,000, chartered by John A. Geary, N. J. Geary, L. L. Shadoin and others; plans to develop oil wells in Wayne, Estill and McCreary coun-

ties.

La., Rayville.—Rayville-Richland Oil, Gas & Pipe Line Co., capital \$15,000, incptd.; D. R. Sarter, Prest.; C. J. Ellis and Henry P. Jones, V.-P.; J. W. Summerlin, Secy-Treas.

Okla., El Reno.—Canadian County Oil Co., capital \$25,000, incptd. by W. J. Finch, R. C. Rice and Chas. Engle.

Okla., Enid.—Covington Oil Corp., capital \$20,000, incptd. by W. O. Cromwell, L. L. Cromwell and H. A. Lee.

Okla., Enid.—Sisson-Wells Oil Corp., capital \$35,000, chartered by J. E. Smith and H. G. McKeever of Enid, and E. N. Wells, Fairmont, Okla.

Okla., Holdenville.—Fore Oil Co., capital \$10,000, incptd. by Guy M. Buchner of Holdenville, J. S. McClelland and Henry R. Danmer of Indianapolis, Ind.

Okla., Hominy.—Kaplan Oil & Gas Co., capital \$50,000, incptd. by Jos. Kaplan, Sol H. Robinson and Carl Bullendore.

Okla., Oklahoma City.—Neptune Drilling Co., capital \$7500, incptd. by R. H. Locke and A. J. McMahan of Oklahoma City and D. R. Neptune of Tulsa.

Okla., Okmulgee—Gasoline.—Florentine Gasoline Co., capital \$50,000, incptd. by E. W. Kimbley, G. A. Simons and G. A. Johns.

Okla., Oklahoma City.—Alvarado Oil Co., capital \$25,000, incptd. by F. B. McElroy of Oklahoma City and C. A. Schaeffer of Kansas City, Mo.

Okla., Tulsa.—Rotary Oil & Gas Co., capital \$40,000, incptd. by J. L. Piersol, H. S. Patterson and R. H. Whitney.

Okla., Tulsa.—Aetna Oil & Gas Co., capital \$30,000, incptd. by S. S. Mohrman, C. R. Travers and C. W. Cartmell.

Okla., Hennessey.—Boulder Oil & Gas Co., capital \$4000, incptd. by Z. T. Bilbush, J. H. Daulton and Geo. Holmes.

Okla., Ponca City.—Friends Oil Co., capital \$100,000, incptd. by F. A. Heberling, E. W. Heberling and A. M. England.

Okla., Tulsa—Gasoline.—Cloco Gasoline Co., capital \$100,000, incptd. by H. F. Bethman, E. R. Perry and H. A. Gibson.

Okla., Tulsa—Oil Refinery.—Tulsa Gas-Oil Refining Co., capital \$600,000, incptd. by John B. Enfield of Tulsa, W. R. Southworth of Canton, Okla., and J. L. Hughey of Enid, Okla.

Tex., Dallas.—Western Exploiting Co., capital \$200,000, incptd. by W. H. Flippin and T. D. Graham of Dallas, W. H. Richardson, Jr., and W. W. Fisher of Austin; has oil and mineral leases in Borden, Dawson, Howard and Martin counties.

Tex., Houston.—T A R Oil Co., capital \$4000, incptd. by E. W. Townes, Wm. A. Vinson and J. H. Ross.

Tex., Wichita Falls.—Company organized with J. A. Kemp, Prest.; R. O. Harvey, Secy.; B. J. Johnson, Asst. Secy.; W. M. McGregor, Treas.; will drill for gas.

**ICE AND COLD-STORAGE PLANTS**

Miss., Meridian.—Kaye Bros., 27th Ave. and 5th St., let contract to Frank S. Covert to erect \$6000 manufacturing building; 2 stories; 40x90 ft.; brick and cement; tar and gravel roof; cement floor, first story; wood floor, second story; plans by Burt Stuart. (Lately noted under Stores.)

Okla., Durant.—North American Light & Power Co., W. A. Boehr, Prest., 22 S. Michigan Ave., Chicago, is having plans prepared for ice storage plant and electric-light system to cost \$18,000.

S. C., Florence.—Florence Chamber of Commerce, H. A. Smith, Prest., is interested in proposed establishment of cold-storage plant; capacity 50 beehives, 100 hogs, 500 crates eggs, 1000 bush. potatoes, and car of butter, cheese and lard. (See Machinery Wanted—Cold-storage Plant.)

Tenn., Jackson.—Bearre Bros. Ice & Coal Co. will repair storage building lately (noted) partially destroyed; local work; no outside contracts.

Va., Norfolk.—J. J. McPherson Packing & Ice Co., capital \$300,000, chartered; J. J. McPherson, Prest.; W. L. Renn, Secy.; acquired plant of Arctic Ice Co. on Mason Ave., Brambleton, and will improve; operate packing plant; manufacture ice and ice cream.

**IRON AND STEEL PLANTS**

Ala., Woodward—Electric Steel Furnace.—Woodward Iron Co. advises Manufacturers Record: We are not contemplating building electric furnace in near future. (Refers to reports that the company is planning such a furnace.)

Ky., Cadiz—Iron Furnace.—Geo. L. Berry, Chrmn. Printing Pressmen and Assistants' Union Home, Pressmen's Home, Tenn., writes to Manufacturers Record: It is not my intention to operate the furnace on the Hillman property recently purchased by me. (Lately noted buying iron furnace and 5000 acres land.)

**IRRIGATION SYSTEMS**

Tex., Barstow.—Ward County Irrigation Dist. No. 1 issued \$50,000 bonds; will soon let contract for Rocky Ford canal and dam, and for protection levee on east side Pecos River; John B. Hawley, Barstow, Const. Engr.

**LAND DEVELOPMENTS**

Ala., Tuskegee.—Tuskegee Land Co., capital \$15,000, incptd. by Henry B. Merris, J. B. Drakeford and W. E. Huddleston.

Fla., Espanola.—J. M. Parkhill of Kansas City, Mo. and Peoria, Ill., and associates, acquired land in St. John's County and will develop for agriculture. (See Drainage Systems.)

Ga., Macon.—Georgia Fruit & Stock Farm, capital \$4000, incptd. by J. E. Guilford and H. B. Mozo.

Okla., Tulsa.—Taneha Construction & Development Co., capital \$25,000, incptd. by S. D. Elliott and Edward Yoder of Tulsa, and J. P. Johnson of St. Charles, Mo.

S. C., Pickens.—Blue Ridge Development Co., capital \$6000, incptd. by C. L. Cureton, J. A. Bruce and D. Bruce.

Tex., Austin.—San Jacinto Battlefield Com., Maurice Hirsch, Houston, Tex., member, will petition Legislature for \$50,000 for additional improvements to battlefield, principally to driveways.

Tex., Houston.—Northern Development Co., capital \$10,000, incptd. by M. A. Culver, H. E. Stephenson and Fred Wells.

Tex., Wichita Falls.—City voted \$15,000 bonds to improve Riverside Cemetery; plans to finish fence, erect concrete chapel and restroom and construct driveway. Address The Mayor. (Noted in Oct.)

Va., Portsmouth.—H. L. Maynard and associates purchased 200 acres on Western Branch and will develop as residential suburb; reported to expend \$100,000 for improvements.

Va., Portsmouth.—H. L. Maynard and associates purchased Armistead tract of 192 acres on Western Branch of Elizabeth River and will develop as residential section; plan to expend about \$100,000 to plat property, construct streets, sewer system, electric-light system, etc.

Va., Richmond.—Murray Land Corp., capital \$15,000, chartered; G. D. Holdsworth, Prest.; Vernon Jenkins, Secy-Treas.

Va., Richmond.—Buffalo Gas Development Co., capital \$50,000, incptd.; J. D. Jones, Prest.; G. E. Du Val, Secy.

**LUMBER MANUFACTURING**

Ala., Birmingham.—Patton Sawmill Co., capital \$2000, incptd.; R. F. Manly, Prest.; C. F. Manly, V.-P. and Treas.

Ark., Moscow.—W. S. Elder of Sheridan, Ark., purchased timber rights on 700 acres and will build mill.

Fla., Walton County.—Kirby Lumber Co. of Houston, Tex., purchased 17,000 acres timber land in Walton and Holmes counties; will utilize timber in manufacture of cross-ties for New York Central & Hudson River Ry.

Tenn., Lake Providence.—O. T. Woodard of Memphis, Tenn., purchased 5518 acres timber land in East Carroll Parish; will erect band saw mill of 30,000 ft. daily capacity.

Miss., Redwood.—Mound Tie Co., capital \$3000, incptd. by Edward Y. Smith and Irene W. Smith, both of Vicksburg, and J. Gilbert Burton of New Orleans.

Miss., Greenwood.—Church-Milton Lumber Co. will build plant.

Okla., Tulsa.—F. S. Miller Lumber Co., capital \$50,000, incptd. by F. S. Miller, Tulsa; H. C. Miller, Vinita, Okla.; E. A. Miller, Seneca, Mo.

Tenn., Memphis.—Tensas Land & Lumber Co., capital \$25,000, incptd. by O. T. Woodard, T. T. Rebor, C. L. Smith and others.

Tex., De Kalb.—Lee Rosenberg, Texarkana, Ark.-Tex., purchased 2000 acres land and will cut timber into commercial lumber; after tracts are cleared, will convert into stock farm.

W. Va., Nallen.—Wilderness Lumber Co., Peter Carroll, Prest.-Mgr., Charleston, W. Va., advises Manufacturers Record: Machinery all purchased and being installed; band mills, dynamos, engines, etc., costing \$75,000; whole plant (double band mill) costing \$200,000; daily capacity, 100,000 ft. hardwood lumber; W. E. Morenus, Engr., Nallen. (Previously noted.)

**METAL-WORKING PLANTS**

Ga., Winder.—Drawer Set.—Smith-Mayne Mfg. Co., R. A. W. Smith, Prest., will manufacture detachable drawer set (patent of L. M. Mayne, Supt.) for placing furniture and fixture drawers, etc., on rollers, with steel track and steel stocks; drawer sets to be made of sheet metal and steel, with fiber rollers; has building and machinery. (See Woodworking Plants.)

**MINING**

Ky., Ashland.—Nats Creek Mining Co., capital \$32,000, incptd. by L. S. Wilson, S. E. Harman and Edgar P. Rice.

Ky., Pikeville.—Massy Bottom Mining Co., capital \$6000, incptd. by J. J. Christie, M. C. Justice and A. J. Younce.

Md., Bethesda—Granite.—Bethesda Blue Granite Co., Alain E. Walker, Prest., 1338 G St. N. W., Washington, D. C., advises Manufacturers Record: Opening quarry on B. & O. branch to Georgetown, about 1 mi. from Bethesda; product will be monumental stone; sell both in rough dimension and finished monument. (Lately noted as having ordered polishing and finishing machinery for further developments.)

Md., Cardiff—Slate.—Baltimore Peach Bottom Slate Corp., C. R. Gray, Jr., Prest. and Gen. Mgr., Delta, Pa., is enlarging mine to increase output of mined slate; constructing 90-ft. tunnel, to open additional chambers; Claiborne, Johnston & Co., 910 Garrett Bldg., Baltimore, Contrs. for tunnel. (In Sept. noted reorganized, capital \$300,000, and to enlarge and improve plant.)

Mo., St. Louis—Zinc.—Miami Zinc Co., capital \$25,000, incptd. by Elias S. Gatch, Kenneth Burnes, Nelson B. Gatch and others.

N. C., Kinston—Marl.—Lon Hines may develop marl deposits on 300 acres of Jones County land.

Okla., Century.—Aileen Mining Co., capital \$150,000, incptd. by J. J. Mitchel of Oklahoma City, Noble J. Dilday and Murray Davis of Kansas City, Mo.

Tenn., Union County—Zinc.—Union Zinc Co., capital \$75,000, incptd. by A. A. Blow (Prest.), H. M. Johnston, J. Allen Smith and others, all of Knoxville; plans further development of zinc mines in Union County; increase present daily capacity of 100 tons of concentrates.

Va., Jones Store—Lead and Zinc.—Virginia Lead & Zinc Corp. (lately noted, under Richmond & Zinc Corp.) developed from \$800,000 to \$900,000) develops 1270 acres; daily capacity 75 tons; Berkely Williams, Prest.; W. Miles Carey, V.-P.; H. H. Chaikley, Secy.; Deane Maury, Treas.; all of Richmond; J. H. Batcheller, Mgr., Jones Store. (See Machinery Wanted—Rails.)

**MISCELLANEOUS CONSTRUCTION**

Fla., Daytona Beach—Pier.—City contemplates voting on \$15,000 bonds, of which \$8000 will be expended for purchase of T. H. Keating casino and ocean pier, and \$7000 for repairs. Address The Mayor.

Tenn., Titusville—Harbor Improvement—Canaveral Land & Harbor Improvement Co. (lately noted incptd., capital \$6000; Rufus M. Robbins, Prest.) organized to succeed former company holding land at Canaveral Bight, with contemplated future construction of docks and piers.

Ky., Louisville—Canal Mitering Gates—United States Engineering Corps., Major Geo. R. Spalding in charge, opened bids to furnish and install canal mitering gates; lock will be 600 ft. long by 110 ft. wide; besides timber, materials required are estimated as follows: Structural steel, 1,063,400 lbs.; cast steel, 220,650 lbs.; nickel steel, 4600 lbs.; forged steel, 19,400 lbs.; steel, 13,100 lbs.; cast iron, 1735 lbs.; phosphor-bronze, 1920 lbs.; babbitt metal, 4800 lbs.; lead, 14 lbs. (Lately invited bids.)

Tenn., Hahnville.—Commiss. Pontchartrain Levee Dist. will construct Sarpy Levee, left bank Mississippi River, St. Charles Parish; contents 180,000 cu. yds.; bids at office Board

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## MANUFACTURERS RECORD.

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**of State Engrs., New Orleans, until Nov. 29. (See Machinery Wanted—Levee Construction.)**

**Miss., Bay St. Louis—Seawall.—Bond Com., Jos. F. Cazeneuve, Chrmn., asks bids until Dec. 1 to construct concrete seawall, about 701 ft., and filling behind seawall with sand, about 11,365 cu. yds.; David U. Harris, Engr., Mobile, Ala. (See Machinery Wanted—Concrete Seawall.)**

**Miss., Natchez—Concrete Revetment.—Natchez & Southern Ry. Co., C. B. Brownell, V.-P. and Gen. Mgr., Natchez, advises Manufacturers Record relative to lately-noted construction: Perfected all details for concrete river revetment, cost \$18,000; no contracts to be let.**

**Mo., St. Louis—Dock.—City let contract to Heman Construction Co., 724 Title Guaranty Bldg., St. Louis, to erect dock, and all machinery has been ordered; cost about \$200,000; C. E. Smith, Engr., Railway Exchange Bldg., St. Louis. (In October Heman Construction Co. noted as probable contractor; dock located at N. Market St.; concrete; wooden piling; length 900 ft.)**

**Tex., Beaumont—Wharf.—City let contract to S. J. Bean at \$2800 to build foundation of municipal wharf. (Noted in Sept.)**

**Tex., Barstow—Levee.—Ward County Irrigation Dist. No. 1, John B. Hawley, Barstow, Comst. Engr., will construct protection levee east side Pecos River. (See Irrigation Systems.)**

**Tex., Dallas—Levee.—Dallas County Levee Improvement Dist. No. 1 will issue \$48,000 levee construction bonds.**

**Tex., Port Arthur—Wharf Addition.—Gulf Refining Co. (main office, Pittsburgh, Pa.) let contract to James Stewart Co., Houston and New York, to construct addition to wharf. (Noted in Aug.)**

**Va., Fort Story—Wharf.—War Dept., Washington, D. C., authorized Col. J. P. Jersey, in charge of United States Engrs. office for Norfolk Dist., Norfolk, Va., to prepare specifications for wharf to be built on Chesapeake Bay, 2 mi. west of Cape Henry as adjunct of new Fort Story; wharf to be of creosoted wooden pile construction 1500 ft. long and cost \$125,000; head of pier to have 3 faces.**

**MISCELLANEOUS ENTERPRISES**

**Ga., Savannah—Stevodoring, etc.—Georgia Stevodoring Co., capital \$5000, Incptd. by H. G. Strachan, Robt. W. Groves and W. J. MacPherson.**

**Ga., Savannah—Abattoir, etc.—Georgia Land & Cattle Co. plans to build abattoir costing \$100,000; has 5000 acres for cattle feeding and plant site; will ship fresh meat to Savannah by motor trucks and to Brunswick, Ga., Charleston, S. C., and Jacksonville, Fla., by rail.**

**Ky., Carlisle—Hardware.—Howard Hardwear Co., capital \$6500, Incptd. by J. W. Howard, E. N. Howard and W. M. Mathers.**

**Mo., Joplin—Grain Elevator.—Hanna-Pate Grain Co., P. C. Pate, Prest.-Mgr., Box 546, will rebuild grain elevator lately noted burned; erect building of 10,000 bus. capacity; install machinery for cleaning and shelling corn, oats and beans.**

**Mo., Kansas City—Publishing.—Puntion Bros. Publishing Co. leased 3-story and basement building at 1014-1016 Wyandotte St. to be remodeled at cost of \$20,000 under direction of Sam B. Tarbet & Co., Archts.; publishing company will expend \$25,000 for machinery.**

**Okla., Broken Bow—Publishing.—Broken Bow News Co., capital \$1000, Incptd. by R. M. De Witt and John C. Head of Broken Bow, and M. L. Henderson of Idabel, Okla.**

**Tenn., Nashville—Mineral Water.—Thompson Mineral Water Co., capital \$100,000, Incptd. by H. A. Thompson, J. H. Wiles, Jr., E. H. Murray and others.**

**Tex., Eagle Pass—Fumigating Plant.—Government and State let contract to L. F. Seed to build Federal and State fumigating plant; brick and concrete; cost \$3650; cost of plant, with machinery, \$600.**

**Tex., Taylor—Abattoir.—City let contract Howard & Dickey of Taylor to build abattoir, and to F. Kutzschbach of Taylor for plumbing; A. V. Hyde, City Clerk. (Noted in October as inviting bids.)**

**Tex., Waco—Grain.—Cornforth Grain Co., capital \$5000, Incptd. by J. R. Cornforth, Sem. Nix and J. W. Mann.**

**Va., Norfolk—Engineering.—Lyton-Wood Engineering Co., capital \$15,000, Incptd.; J. W. Lyton, Prest.; R. B. Wood, Secy.-Treas.**

**W. Va., Huntington—Paving Contracting. Brubaker Paving Co., capital \$20,000, Incptd.**

**G. S. W. Brubaker, Prest.-Mgr.; W. C. Renshaw, V.-P.; G. F. C. Schiller, Secy. and Supt.; highway contracting.**

**MISCELLANEOUS FACTORIES**

**Ala., Clanton—Turpentine.—Alabama Turpentine Co. purchased timber rights on 11,550 acres land in Chilton county and will develop for turpentine; controls total of about 300,000 acres.**

**Ark., Warren—Bottling.—H. J. Hill contemplates erecting bottling works; 4x61 ft.**

**Fla., Bradenton—Brushes.—Bradenton Brush Co., capital \$15,000, Incptd.; Harry Wadham, Prest.; S. A. Bean, V.-P.; O. L. Stuart, Secy.; R. R. Fenton, Treas.; Wm. Schlect, Gen. Mgr.**

**Fla., Jacksonville—Insect Powder.—Insect & Pest Exterminator Co., capital \$20,000, Incptd.; A. S. Castellano, Prest.; R. A. Mills, V.-P.; J. A. Dean, Secy.; F. W. Butler, Treas.**

**Fla., Jacksonville—Shipyard.—Hillyer-Sperring-Dunn Co., Box 371, will install galvanizing plant in connection with new woodshipbuilding yard; in September noted organized, capital \$200,000, Chas. L. Hillyer, Prest., and as securing 600-ft. water-front for shipyard to build schooners, barges, lighters, etc. (See Machinery Wanted—Galvanizing Plant.)**

**Fla., Pensacola—Naval Stores.—Newport Turpentine & Rosin Co., general offices, Milwaukee, Wis., W. B. Logan, Mgr., lately noted to meet Dec. 1 to increase capital from \$100,000 to \$350,000, advises Manufacturers Record: Total plant cost \$400,000; fireproof structural steel concrete construction; plans by the company's engineering department; will install 2000 H. P. boilers, grinding machinery, still and companion apparatus, etc.; daily capacity, 125 round bbls. rosin, 25 bbls. turpentine, 10 bbls. pine oil. (Contract for buildings previously let to C. H. Turner & Co., Pensacola.)**

**Fla., St. Augustine—Bakery.—Moeller Bros. let contract E. J. Masters of St. Augustine to erect bakery; brick; probably 2 stories. Ga., Atlanta—Street and Station Indicators.—H. K. Dusfield and W. Z. Musgrave contemplate erection of plant to manufacture patented street and station indicators. Ga., Port Wentworth—Paper and Pulp.—Atlantic Paper & Pulp Co. organized; Prest., I. H. Fetty, Prest. of Savannah River Lumber Co.; V.-P. and Gen. Mgr., M. T. Nichols; Secy., S. C. Lawrence; Treas., Edwin Shaw, Secy.-Treas. of Savannah River Lumber Co.; all of Savannah; will manufacture pulp and paper; has not let building contracts. (Lately noted Incptd. with \$1,500,000 capital to build plant with daily capacity 50 tons pulp, and Mr. Fetty as wiring Manufacturers Record that plant is to cost \$500,000.)**

**Ga., Savannah—Skirts, etc.—Economy Mfg. Co., capital \$10,000, Incptd. by J. Marill, David S. Atkinson and Elton S. Osborne.**

**Ga., Waycross—Creamery.—Waycross Creamery, Incptd., capital \$10,000, to establish plant.**

**Ky., Louisville—Dental Supplies.—Hallerberg Dental Laboratory & Mfg. Co., capital \$20,000, Incptd.**

**Md., Baltimore—Electric Silicon.—Shawmegan Electro-Products Co., United States Fidelity & Guarantee Bldg., will add third unit to plant (3220 Philadelphia Rd.) for manufacturing electro silicon; 10,000 H. P.; increase daily capacity by 75 tons.**

**Mo., St. Louis—Branozo Realty Co. will erect factory at 4409 Cook Ave.; 3 stories; cost \$40,000.**

**Mo., St. Louis—Shoes.—Boyd-Welch Shoe Co., Page and Newstead Aves., will build plant; site has frontage of 451 ft.; plans by Albert G. Groves of St. Louis.**

**Mo., St. Louis—Chemicals.—Sanol Chemical Co., capital \$50,000, Incptd. by F. K. Wedemeyer, Wm. R. Gilbert and John H. Wedemeyer.**

**Mo., St. Louis—Chemicals.—Colding Chemical Co., capital \$50,000, Incptd. by Geo. C. V. Fesler, J. M. Arndt, H. E. Sprague and L. C. Kingsland.**

**N. C., Durham—Cigarettes.—American Tobacco Co. (main office, 111 Fifth Ave., New York) let contract N. Underwood, Durham, to enlarge factory; place basement under entire plant for cutting and casing department; install additional machinery; estimated expenditure \$35,000. (Lately reported as having plans prepared.)**

**Tex., Taylor—Abattoir.—City let contract Howard & Dickey of Taylor to build abattoir, and to F. Kutzschbach of Taylor for plumbing; A. V. Hyde, City Clerk. (Noted in October as inviting bids.)**

**Tex., Waco—Grain.—Cornforth Grain Co., capital \$5000, Incptd. by J. R. Cornforth, Sem. Nix and J. W. Mann.**

**Va., Norfolk—Engineering.—Lyton-Wood Engineering Co., capital \$15,000, Incptd.; J. W. Lyton, Prest.; R. B. Wood, Secy.-Treas.**

**W. Va., Huntington—Paving Contracting. Brubaker Paving Co., capital \$20,000, Incptd.**

**S. C., Charleston—Bottling.—Soft Drink Co. increased capital from \$5000 to \$100,000.**

**S. C., Greenville—Bottling.—Orange Whistle Co., capital \$10,000, organized with W. A. Yates, Prest.; C. W. Yates, V.-P.; C. H. Yates, Secy.-Treas. (Noted in October as Incptd.)**

**S. C., Hartsville—Novelties.—Southern Novelty Co. will make additions to plant.**

**Tenn., Nashville—Medicine.—Ku-Rall Medicine Co., capital \$100,000, Incptd. by John W. Thomas, Jr., W. H. Weakley, John Guthill and others.**

**Tenn., Nashville—Soap.—Enterprise Soap Works will rebuild plant reported burned at loss of \$75,000.**

**Tex., Fort Worth—Creamery.—Nissley Creamery Co. will erect creamery; 2 stories and basement; brick and reinforced concrete; 100x100 ft.; 30,000 sq. ft. floor space; refrigerating department to have capacity of 40 tons, with two 20-ton refrigerating machines. (Noted in July as having plans prepared.)**

**Va., Norfolk—Ice-Cream.—J. J. McPherson Packing & Ice Co. Incptd. with J. J. McPherson, Prest.; will manufacture ice-cream, etc. (See Canning and Packing Plants.)**

**Va., Richmond—Paper.—Dixie Paper Mills, capital \$50,000, Incptd.; R. A. Cauthorne, Prest.; M. E. Marcus, V.-P.; R. H. Smith, Jr., Secy.; C. W. Baker, Mgr.; has plan; with daily capacity 20 tons wrapping paper.**

**W. Va., Huntington.—Huntington Mfg. Co., capital \$25,000, Incptd. by H. C. Hale of Huntington, W. S. Perry (Cnsbr. First National Bank), Jenkins, Ky., and others.**

**MOTOR CARS, GARAGES, TIRES, ETC.**

**Ark., Helena—Automobiles.—Mutual Garage Co., Walnut St. (lately noted Incptd., capital \$5000), will deal and repair in automobiles; has building and equipment.**

**Ala., Mobile—Garage.—Miller Motor will occupy brick garage to be erected by Van Antwerp Estate.**

**Ga., Augusta—Garage.—Mrs. Fannie T. Maxwell, Greene St., let contract to McKenzie Building Co., Schneider Bldg., Augusta, to erect \$2700 garage at 557 Broad St.; 25-ft. 6-in. by 100-ft. brick building with tin roof and concrete floor; electric lighting; plans by T. J. Laurence, Schneider Bldg.**

**Ky., Lexington—Service Station.—Gulf Refining Co., 3d and Kentucky Sts., will erect brick and concrete gasoline service station.**

**Ky., Somerset—Garage.—Dixie Garage incorporated by Beecher Smith, J. B. Mershon and John Fish.**

**La., Lake Charles—Garage.—Lake Charles Ford Auto Co. will lease brick building costing \$5000 to be erected by Thos. C. Plauche.**

**La., Shreveport—Garage.—Wray Dickinson Co., G. D. Wray, Prest., let contract to W. H. Werner, Shreveport, to erect 110x140-ft. fireproof building to cost \$60,000; plans by E. F. Neild, Shreveport. (Lately noted.)**

**Md., Baltimore—Garage.—A. & H. Garage, 1306-1308 N. Fulton Ave., leased garage to be erected on Monroe St. between Lorraine and Laurens Sts. by Cityco Realty Co., 2 E. Lexington St.; structure will be 45x250 ft.; 1 story; accommodate about 75 cars; H. M. Reinhart & Co., Contrs., 517-519 Calvert Bldg.; Fred E. Beall, Archt., 306 St. Paul St., both of Baltimore. (Noted in June.)**

**Md., Ridgeville—Auto Repairs.—Eagle Garage and Machine Shop (Dudderar & Baker, Mt. Airy, Md.) will erect 65x109-ft. 1-story ordinary brick construction \$3200 building for auto repairing; plans by Lloyd Culver, Frederick, Md.; B. T. Baker, Mt. Airy, Contr.; machinery will be transferred from present garage.**

**Mo., Joplin—Automobiles.—Sober-Kuhn Automobile Co., capital \$15,000, Incptd. by E. W. Kuhn, F. A. Sober, F. W. Lawder and others.**

**Mo., St. Louis—Garage.—Wm. McNicol will build garage.**

**N. C., Hertford—Garage.—Divers & Raper let contract to Campbell & Perry, Hertford, to erect 2-story garage; 36x80 ft.; plate-glass front; cement floor; plans by J. A. Campbell, Edenton, N. C.**

**Okla., Delaware—Garage.—Dodd Bros. contemplate erecting garage.**

**Okla., Fairfax—Garage.—M. Mortenson will erect garage.**

**Okla., Hennessey—Garage.—R. J. Hausman will erect garage.**

**Okla., Jenks—Garage.—Simmons & Snyder let contract Jason Francisco to erect garage; concrete; 40x70 ft.**

**Okla., Tulsa—Garage.—John O. Mitchell will erect garage at Eighth and Main Sts.; cost \$15,000.**

**S. C., Columbia—Garage.—Consolidated Auto Co., 1316 Sumter St., will erect garage; 3 stories.**

**Tenn., Nashville—Automobiles.—Stockell Motor Car Co., capital \$35,000, Incptd. by W. F. Stockell, Albert W. Stockell, H. A. Rollings and others.**

**Tex., Cameron—Garage.—Chambers Auto Supply Co. will build garage; 2 stories; brick; 60x110 ft.**

**Tex., Farwell—Garage.—Smith & Townes, Archts., Amarillo, Tex., are preparing plans for garage.**

**Tex., Fort Worth—Automobiles.—De Luxe Motor Co., capital \$15,000, Incptd. by J. E. Mitchell, W. T. Simmons and T. B. Van Tuyl.**

**Tex., Fort Worth—Garage.—Jas. Welch will erect garage; 2 stories; brick; cost \$12,000; Anderson & Wallace, Contrs., Fort Worth.**

**Tex., Fort Worth—Garage.—Wyatt Motor Car Co. will erect building for garage, showroom and service station; 3 stories; brick; cement foundation; cost \$16,000.**

**Tex., McKinney—Garage.—G. I. Wilcox let contract to T. M. Miller, Vickery, Tex., to erect 70x108-ft. garage; cost \$15,000; hard and face brick construction with concrete substructure; asbestos roofing; concrete floor; electric lighting; freight elevator.**

**Tex., Paris—Garage.—Rodger-Wade Furniture Co. is reported to erect garage; 2 stories; brick; cost \$4000.**

**Va., Bristol—Garage.—A. Jay Sheldon & Co., capital \$10,000, Incptd. by A. Jay Sheldon (Prest. and Gen. Mgr.), O. L. Jones and Geo. S. Barger; has building and will install equipment for vulcanizing department, storage battery service station, repair department, gas filling station, etc.**

**RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.**

**Okla., Muskogee—Missouri, Kansas & Texas Ry., L. F. Lonnblad, Ch. Engr., Dallas, Tex., has plans for buildings to cost about \$105,000; plans provide for 15-stall brick and concrete roundhouse, machine shop, coaling station, 90-ft. turntable, cinder pits and engine-inspection pits; lay several thousand feet of track into and around shops and roundhouse.**

**S. C., Hayne—Southern Railway, W. H. Wells, Ch. Engr. Constr., Washington, D. C., contemplates improvements, to include engine terminal facilities and increase in yard capacity from 761 to 1860 cars as follows: Rearrangement and extension of eastern end of present receiving and classification yard, so as to consist of 16 tracks with 940 cars capacity instead of 14 tracks with 527 cars; enlargement of storage-yard, now consisting of 3 tracks with 234 cars capacity to 11 tracks with 920 cars capacity; engine building facilities to consist of mechanical cooling plant of reinforced concrete construction with capacity of 1000 tons in its bins and 5000 tons ground storage; frame engine-house with 4 wash pits; 11 engine standing tracks; 100-ft. turntable operated by electricity; 3 cinder conveyors; frame boiler and air compressor house; sandhouse; water supply; relocation of passenger station; 2 underpasses, eliminating 3 grade crossings. (Lately noted under S. C., Spartanburg, to enlarge roundhouses and yards.)**

**Md., Baltimore—Garage.—A. & H. Garage, 1306-1308 N. Fulton Ave., leased garage to be erected on Monroe St. between Lorraine and Laurens Sts. by Cityco Realty Co., 2 E. Lexington St.; structure will be 45x250 ft.; 1 story; accommodate about 75 cars; H. M. Reinhart & Co., Contrs., 517-519 Calvert Bldg.; Fred E. Beall, Archt., 306 St. Paul St., both of Baltimore. (Noted in June.)**

**Ala., Birmingham—City Com. let following contracts to Dunn Construction Co., Birmingham: At \$102,490, to pave 6th Ave. S. from 18th St. to Montevallo Rd., with sheet asphalt, 1-in. binder, 1½-in. wearing surface, and 5-in. concrete base; includes 30,000 cu. yds. earth and 3500 cu. yds. rock excavation, 51,490 sq. yds. sheet-asphalt paving, 2500 sq. yds. brick gutter, 14,000 lin. ft. combined curb and gutter, 14,002 lin. ft. straight granite curb, 1170 ft. circular granite curb, and 4600 ft. granite curbing reset, etc.; for paving Tuscaloosa Ave. from 6th to 14th Sts. S. W. with sheet asphalt, 1-in. binder, 1½-in. wearing surface; estimated cost, \$34,300; including 22,700 sq. yds. sheet asphalt, also granite curb, cement combined curb and gutter, cement sidewalk, inlets, repairs, etc., with 300 sq. yds. granite block track paving;**

at \$200 to pave 11th Ave. N., from 30th to 33d St.; includes 600 cu. yds. excavation, 1650 lin. ft. cement combined curb and gutter, 900 sq. yds. cement sidewalk and 4000 sq. yds. asphaltic concrete paving; Julian Kendrick, City Engr. (Paving bids lately noted.)

Ala., Gadsden.—Etowah County Highway Com. let contract to construct Wills Valley Rd.; chert surface; estimated cost \$10,000.

Ala., Gadsden.—Etowah County Highway Com. let contract J. F. Morgan & Co. to build road beginning at bridge near falls and connecting with Little Wills Valley Rd., 2 mi.; cost \$10,000.

Fla., Madison.—City let contract to Capital Paving & Construction Co., Tallahassee, Fla., for about 4 mi. cement sidewalk; same contractor completing 5-mi. contract let in May.

Ga., Augusta.—City plans \$18,000 expenditure to pave Central Ave.; Nisbet Wingfield, City Engr.

Ky., Hickman.—City defeated bonds for street improvements. (Lately noted.)

Ky., Middlesboro.—City let contract G. P. Sharp to macadamize Cumberland Ave. from 18th St. to Fitzpatrick Ave., 18th St. from Cumberland to Lothbury Ave., 19th St. from Chester to Lothbury St. and 20th St. from Chester to Cumberland Ave. (Noted in Aug. to pave additional streets.)

Ky., Paducah.—McCracken County voted \$200,000 bonds to construct metal roads; J. M. Lang, official; date of opening bids not set. (Lately noted.)

Ky., Pineville.—Bell County voted \$105,000 bonds to construct roads. Address County Comms. (Noted in Sept.)

La., Jennings.—Jefferson Davis Parish Police Jury let contract Healey Construction Co., Meridian, Miss., to construct main highway, 27 mi. long, between Calcasieu parish line at Iowa and Jennings; J. M. George & Son, Baton Rouge, to construct 66 mi. of highway and Worthington Construction Co., Meridian, 22 mi., all to be 9 ft. wide; these contracts include construction of bridges and culverts, former to be of creosoted wood and concrete; clay and concrete pipe for smaller culverts; total estimated cost \$300,000; remainder of \$500,000 voted for road construction will be expended mainly for purchase of gravel, creosoted lumber, etc. (Noted in August to expend \$500,000 to construct roads and as having preliminary surveys made by W. L. Stevens, Engr., 312 Whitney-Central Bldg., New Orleans.)

La., Monroe.—Ouachita Parish Superv., Dist. No. 1, Carl H. McHenry, Prest., asks bids until Dec. 18 to grade, drain and surface with gravel 18.8 mi. Monroe-Columbia Rd. and 6.11 mi. Monroe-Millhaven Rd.; J. W. Billingsley, Consul. Engr.; R. P. Boyd, Res. Engr. (See Machinery Wanted—Road Construction.)

La., Monroe.—Ouachita Parish Superv., Dist. No. 2, T. E. Flournoy, Prest., asks bids until Dec. 18 to grade, drain and surface with gravel the following roads: Monroe Loop, 4.9 mi.; Monroe-Farmerville, 15.3 mi.; Morehouse Parish, 2.3 mi.; Monroe-Bastrop, 15.2 mi.; Old Vicksburg Rd., 5.6 mi.; J. W. Billingsley, Consul. Engr.; R. P. Boyd, Res. Engr. (See Machinery Wanted—Road Construction.)

Md., Baltimore.—City let contract Thos. F. Mullan, 4001 Greenmount Ave., Baltimore, at \$18,512 to grade Gwynn's Falls Parkway from Denison to Rosedale St.; 65,000 cu. yds. (Lately noted inviting bids.)

Md., Baltimore.—City will grade and pave with cement concrete various alleys; Contract A-3; bids until Nov. 22; R. M. Cooksey, Highways Engr. (See Machinery Wanted—Paving.)

Miss., Greenwood.—Le Flore County Supervisors let contract Memphis Asphalt & Paving Co. of Memphis, Tenn., to pave with asphalt road from Greenwood to Lucas' gin, and to Kane-Kelly Construction Co. of New Orleans, La., for road construction, asphaltic oil penetration treatment.

Miss., Hattiesburg.—Forrest County Supervisors will issue \$100,000 bonds for road construction; also \$50,000 bonds for road construction in Beasts 2, 4 and 5.

Miss., Jackson.—Hinds County Supervs. let contracts for 30 mi. of gravel cross roads to connect main roads as follows: S. A. Gano—Clinton-McRaven Rd., Sanders Rd and Terry-Pine Grove Rd. in Dist 5 and Garland and Laverton Rds. in Dist 1; Hinds County Construction Co. — Whitfield-Clinton, McRaven and Tinnin Rds. in Dist 1; total cost \$51,000.

Miss., Lexington.—Holmes County, Beat 4, will grade, raise and terrace with gravel road from Thornton to iron bridge at Shipp Pike, 4.2 mi.; Highway Comms. of Beat 4,

Thornton, Miss., receive bids until Nov. 25; Snowden & Hauser, Engrs., Durant, Miss. (See Machinery Wanted—Road Construction.)

Miss., Oxford.—Lafayette County, Taylor Road Dist. (in Oct. noted as voting bonds), will construct 11 mi. sand-clay road; bids until Dec. 1; J. E. Walker, J. C. Treloar and I. A. Tatum, Comms.; Snowden & Hauser, Engrs., Jackson and Columbus, Miss. (See Machinery Wanted—Road Construction.)

Mo., Linn.—Osage County defeated bonds for road construction. (Lately noted.)

N. C., Belhaven.—City will pave sidewalks on each side of Main St., from Tooly to Haslin St.; ½ mi.; bids until Nov. 20; W. B. Tooly, Mayor. (See Machinery Wanted—Paving.)

Okl., Beggs.—City voted \$18,000 bonds to construct sewers; McIntosh-Walton Co., Engr., Oklahoma City; C. J. Brace, City Clerk. (See Machinery Wanted—Sewer Construction.)

S. C., Bishopville.—City votes Dec. 12 on \$35,000 bonds to construct sewer system. W. L. Parrott, Mayor.

S. C., Charleston.—City will construct drains, sewers, sewerage pumping station and cast-iron discharge line in Boulevard Area; bids until Nov. 18; J. H. Dingle, City Engr. (See Machinery Wanted—Sewer Construction.)

Tex., Beaumont.—City issued \$25,000 bonds for sewer construction; C. L. Scherer, City Engr. (Noted in August.)

Tex., Bryan.—City voted \$10,000 bonds to construct sewage-disposal plant. Address The Mayor. (Noted in Oct. to vote.)

Tex., El Paso.—City votes Dec. 19 on \$255,000 bonds for civic improvements; \$100,000 for septic tanks for disposal plant; \$75,000 for storm sewer to dispose of flood waters from foothills; \$40,000 for street grading fund; \$40,000 for sewer extension fund; Tom Lea, Mayor. (Lately noted.)

Tex., Fort Worth.—Government let contract to Newport Contracting & Engineering Co., Newport News, Va., to erect lately noted radio station; contractor will sublet electric wiring and erection of 3 steel pipe masts 150 ft. high. (See Machinery Wanted—Radio Station Equipment and Construction Supplies.)

Tex., Gilmer.—Gilmer Telephone Co. will erect exchange.

#### TELEPHONE SYSTEMS

Ala., Albany.—Southern Bell Telephone Co. (main office, Atlanta, Ga.) will erect exchange.

Fla., Key West.—Government let contract to Newport Contracting & Engineering Co., Newport News, Va., to erect lately noted radio station; contractor will sublet electric wiring and erection of 3 steel pipe masts 150 ft. high. (See Machinery Wanted—Radio Station Equipment and Construction Supplies.)

Tenn., Chattanooga.—Hamilton County Comms. let contract Bennett & Maloney Construction Co., Chattanooga, at \$37,181 to construct Sequatchie Valley Pike from Glenwood to mouth of Suck Creek, 3.5 mi.; Frank Spurlock, Chrmn. Highway Com. (Lately noted inviting bids.)

Tenn., Knoxville.—City will pave Caswell St. (Dist. No. 128), Pruett Pl. (Dist. No. 130), Circle Drive (Dist. No. 122), and West End Place (Dist. No. 131); paving, 9600 sq. yds.; grading, 3400 cu. yds.; City Comms. receive bids until Nov. 20; J. B. McCalla, City Engr.; John W. Pfeiffer, Commr. of Streets. (See Machinery Wanted—Paving.)

Tenn., Manchester.—Coffee County defeated bonds for road construction; J. A. Gibson, Clerk.

Tenn., Corsicana.—Navarro County, Road Dist. No. 5, will construct roads; \$100,000 bonds issued; bids until Nov. 14; plans and specifications obtainable from J. B. Crockett, Engr., Dawson, Tex.; R. R. Owen, County Judge.

Tenn., Corpus Christi.—City opened bids to construct 24,000 sq. yds. street paving and 15,670 lin. ft. curb and gutter; Texas Bitumastic Co., Dallas, Tex., is lowest bidder. (Noted in Sept. to have specifications and estimates; plans prepared for paving Williams, Taylor and other streets.)

Tex., Dallas.—Dallas County voted \$500,000 bonds to construct permanent road bed in overflow districts. Address County Commissioners. (Noted in Oct. to vote.)

Tex., Houston.—City will have \$25,637.05 for paving Harrisburg Blvd. from Stiles St. to Houston Belt & Terminal Ry. Co.'s tracks; Harris County to pay \$16,000, and Houston Electric Co. to pave 7-ft. width of street.

Tex., Palestine.—Anderson County, Frankston Dist., will vote on \$25,000 bonds to construct roads. Address County Comms.

Tex., Palestine.—Anderson County contemplates voting on \$400,000 bonds to construct roads. Address County Comms.

Tex., Taylor.—City will pave additional streets; issued \$50,000 bonds; Kaw Paving Co., Contr.; A. V. Hyde, City Clk.

W. Va., Grafton.—Taylor County, C. T. Bartlett, Clerk, County Court, defeated bonds for road improvements. (Noted in Oct.)

W. Va., Huntington.—City Comms. let contract Geo. Henkle to pave 11th St. from 10th to 11th Ave.; brick; gravel base.

W. Va., Huntington.—City, H. O. Wells, Commr. of Streets, let contract to Harrison & Dean, A. J. Baxter, Gen. Mgr., Huntington, at about \$8000, to construct brick paving on gravel base on 28th St. and 1st Ave.; A. B. Maupin, City Engr.

#### SEWER CONSTRUCTION

Ky., Richmond.—City, Samuel Rice, Mayor, will not vote on bonds for sewer construction until February or March. (In August, noted to vote on \$35,000.)

Mo., Carl Junction.—City voted \$20,000 bonds to construct sewer system. A. C. Moore, Engr., Frisco Bldg., Joplin.

Mo., Sedalia.—City, E. L. Hackett, Clerk, let contract to J. W. Menefee, Sedalia, at \$58,824, to construct sewage-disposal plant and 2400 ft. sewer extension; Burns & McDonald, Consul. Engrs., Kansas City, Mo.; F. T. Leaming, City Engr. (Bids lately noted.)

Okl., Beggs.—City voted \$18,000 bonds to construct sewers; McIntosh-Walton Co., Engr., Oklahoma City; C. J. Brace, City Clerk.

Okl., Beggs.—City voted \$18,000 bonds to construct water-works; has let contract to lay pipe. Address The Mayor.

Ky., Olive Hill.—City voted \$10,000 bonds to construct water-works and electric-light plant. H. G. Hicks, Mayor.

Ky., Versailles.—City voted \$20,000 bonds to improve water-works. H. C. Taylor, Mayor.

La., Vinton.—City will vote on \$20,000 bonds for water-works installation; contemplated rotary pump, crude oil or distillate engine, tank on tower, 3 mi. mains; T. H. Mandell, Lake Charles, La., Engr.

Mo., Neosho.—Water Board, Wm. Oliver, Chrmn., will lay 4000 to 5000 ft. 4 and 6-in. cast-iron pipe; soon let contract.

Okl., Arnett.—City voted \$65,900 bonds to construct water-works. Address The Mayor. (Lately noted to vote.)

Okl., Beggs.—City voted \$42,000 bonds to construct water-works; McIntosh-Walton Co., Engr., Oklahoma City; C. J. Brace, City Clerk. (Noted in Sept. as planning construction of water-works.)

Okl., Cyril.—City contemplates voting on bonds to construct water-works. Address The Mayor.

Okl., Enid.—City defeated bonds for water-works. (Noted in Sept.)

Okl., Frederick.—City contemplates voting on bonds to improve water works. Address The Mayor.

Okl., Marlow.—City, E. V. Roper, Clk., asks bids until Dec. 4 on equipment for water-works, lately noted to be improved; installation includes engine, boiler, alternator with exciter, switchboard, deep-well pump, etc. (See Machinery Wanted—Water-works Equipment.)

Okl., Okmulgee.—City will install direct-connected, electrically-driven pump with capacity of 1100 gals. per min.; to be accompanied by 11,240 ft. 10-in. pipe, probable effective diam. of 9 in., due to incrustations of lime and iron; present rate of pumping about 750 gals. per min.; present working pressure 55-60 lbs.; pump to be 41 ft. lower than discharge and work with suction line varying from 5-ft. suction to 10 ft. head; motor, 2300-volt, 60-cycle; invites bids; R. H. Jenness, Commr. of Finance. (See Machinery Wanted—Pump.)

Okl., Stroud.—City (lately noted asking bids for Nov. 27 on 75,000-gal. elevated tank) will make improvements, including 75 K. W. generator; 250 G. P. M. pumping plant; addition to power-room (brick construction); Diesel oil engine, alternating generator, etc.; 75,000-gal. tank on 100-ft. tower, and 30x30-ft. concrete storage; additional water mains; change light plant from D. C. to A. C.; Benham Engineering Co., Engr., Colcord Bldg., Oklahoma City; W. A. Hadley, city official.

S. C., Bishopville.—City votes Dec. 12 on \$10,000 bonds to improve and extend water-works. W. L. Parrott, Mayor.

Tex., Newcastle.—City contemplates voting on bonds for water-works. Address The Mayor.

#### WOODWORKING PLANTS

Ark., Warren.—Staves.—Warren Stave Co. will build hardwood mill.

Fla., West Palm Beach—Wooden Novelties. Duke Lumber Co., R. P. Paddison, Res. Mgr., purchased Palm Beach Novelty Works; plans to install sander and blower system.

Ga., Winder.—Smith-Mayne Co., lately noted organized with R. A. W. Smith, Prest., will manufacture detachable drawer set of sheet metal and steel, with fiber rollers. (See Metal-working Plants.)

Mo., St. Louis—Boxes.—Columbia Box Co. will build plant; concrete foundation to cost \$3000.

Tex., El Paso—Sash and Doors.—El Paso Sash & Door Co., M. C. Edwards, Prest., will erect 4 buildings; cost about \$100,000; fireproof or mill construction. (Lately noted having plans prepared for \$100,000 plant.)

#### WATER-WORKS

Ark., Stuttgart.—Stuttgart Public Service Co., Stuttgart, Ark., has 50-year franchise to construct water-works.

Fla., Pensacola.—Mrs. W. M. Herrider's 3 dwellings.

Ga., Royston.—Royston Guano & Warehouse Co.'s building.

#### FIRE DAMAGE

Ala., Birmingham.—J. A. Trickey's residence; Ben Rochester's residence.

Ark., Arkadelphia.—Arthur Meador's residence.

Ark., Texarkana.—Cotton gin owned by G. W. Bishop and operated by Hugh Powell.

Ark., Hope.—C. L. Reece's residence.

Ark., Newport.—Newport Bakery.

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## MANUFACTURERS RECORD.

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Ga., Tennille.—City Jail. Address The Mayor.

Ky., Blue Lick Springs.—John H. Sundys' residence near Blue Lick Springs.

Ky., Frankfort.—Frankfort Milling Co.'s plant; loss \$15,000.

Ky., Mt. Sterling.—Earl Ralph's residence on Grassy Lick Pike; R. I. Settles' residence.

Ky., Willard.—John Kitchen's residence near Willard; loss \$3000.

Ia., Amesville.—Geo. B. Matthews & Sons' grain elevator and warehouse.

Md., Cumberland.—Henry Wolf's barn; loss \$600.

Md., Woodbrook.—Clarence Hooper's residence on Charles St. Ave.; loss \$5000.

Miss., Ackerman.—Mrs. J. J. Moore's dwelling.

Miss., Jackson.—Central Cotton Oil Co.'s warehouse, loss \$15,000; Brown Bros.' livery stable; Dr. W. A. Ewing's veterinary hospital; Taylor-Wilke Grocery Co.'s wareroom; Alfalfa Feed Mill; total loss on latter building, \$35,000.

Mo., Cameron.—Liberal Arts Bldg. and President's residence at Missouri Wesleyan College; loss \$65,000.

Mo., Kansas City.—Porterfield Cake Co.'s plant at 1400 E. 15th St.; loss \$6500.

Mo., Prosperity.—McQuaid Hotel; J. Flanner's livery barn; Osborne Coal Co.'s office; Hurst Restaurant; Resercans' store; Fussell's residence and barber shop; E. M. Sexton's residence, and other buildings; loss \$45,000.

N. C., Goldsboro.—Goldsboro Brick Co.'s plant, owned by H. L. Grant & Son; loss \$10,000.

N. C., Wilmington.—Haywood Newkirk's residence in Winter Park.

S. C., Lexington.—Henry W. Taylor's residence.

Tenn., Columbia.—George T. Hughes, Jr., and Will Green's barn and silos on Natchez Trace ranch; loss \$7500.

Tenn., Jackson.—Bear Bros.' ice plant; loss \$15,000.

Tenn., Knoxville.—L. T. Moore Carriage Works partially destroyed; loss \$11,000.

Tenn., Nashville.—Enterprise Soap Works; loss \$75,000.

Tenn., Newbern.—Wm. F. Holt's stock barn 2 mi. from Newbern.

Tenn., Paris.—Paris Lumber Co.'s plant; loss \$25,000.

Tenn., Puryear.—N. E. Douglas' residence.

Tex., Comstock.—A. A. McDonnell & Co.'s store; loss \$50,000.

Tex., Colorado.—Western Windmill & Hardware Co.'s building, occupied by Winn & Payne; loss on building, \$4000.

Tex., Fort Worth.—Residences of E. E. Churchill, Harry Weisler and M. J. Dowlin; loss \$5000.

Tex., Hartburg.—S. M. Toome & Son's saw-mill; loss \$7500.

Tex., Lexington.—Albert Hahn's saloon; James Mathis' restaurant; W. O. Cook's store; John Goode's store and restaurant; L. W. Corder's drug store; J. Kaplan's store; F. K. Kemp's store; Earl Hester's barber shop; E. M. Peeble's store.

Tex., Memphis.—White & Walker's cotton gin; reported loss \$15,000.

Tex., Newsome.—Wright Bros.' cotton gin wrecked by boiler explosion.

Tex., San Antonio.—Van Webster's warehouse.

Va., Clifton Forge.—Clifton Forge Wholesale Grocery Co.'s store; buildings of J. D. Brooks, C. A. Olphin (owned by J. A. Frazier), E. C. Reynolds, S. C. Sites, Jas. A. Frazier and others; loss \$100,000. (Lately noted.)

Va., Norfolk.—Building owned by Mrs. Franklin Gill of Portsmouth, Va., and occupied by Wills-Smith-Crall, loss \$50,000; Henry Walke Bldg., owned by Mrs. R. M. Wilkinson and Seldon Taylor, loss \$35,000; Tidewater Supply Co.'s building, owned by J. A. Ridgewell, loss \$5000; N. Block's building, occupied by Twin City Iron Works and Norfolk Hide & Metal Co., loss \$22,000; George L. Arp's building, occupied by Wilson-Drummond-Biddle, loss \$20,000; Louis E. Hall's building, occupied by L. A. Hall's Sons, loss \$6000; W. H. H. Trice's building, occupied by Porter & Moore Co., loss \$3000.

Va., Petersburg.—John Byars' dwelling.

W. Va., Moorefield.—Jesse Sherman's residence near Moorefield; loss \$5000.

## BUILDING NEWS

## BUILDINGS PROPOSED

## APARTMENT-HOUSES

D. C., Washington.—Fulton R. Gordon has plans by M. G. Lepley, 1406 G. St. N. W., Washington, for 4-story brick apartment-house; cost \$45,000.

Mo., Kansas City.—Agee-Block Realty & Building Co. will erect apartment-houses, etc. (See Dwellings.)

Mo., Kansas City.—J. Spector will erect business and apartment building. (See Stores.)

Mo., Kansas City.—A. P. Arnold will erect 3-story 6-apartment flat; cost \$6700.

Mo., Kansas City.—Home Investment Co. will erect three 3-story 6-apartment brick flats 1109-11-17-19-21 E. 34th St.; cost \$45,000.

Mo., Kansas City.—Willard B. Weaver will erect 5 apartment-houses; 3 stories; 6 suites; brick; cost \$75,000.

Mo., St. Louis.—F. J. Cornwell Realty Co. will erect business and apartment building. (See Stores.)

Okla., Miami.—Tidwell, Fullerton & Frazier will erect apartment-house; 4 suites; 2 stories.

Oklahoma, Tulsa.—H. C. Stahl will erect 2-story brick flat; cost \$5000.

Tex., El Paso.—J. K. Turbeville will erect apartment-house; cost \$15,000.

Va., Richmond.—W. L. Carneal will erect apartment-house; 2 stories; brick; cost \$6000.

## ASSOCIATION AND FRATERNAL

Ala., Mobile.—Knights of Pythias will increase capital from \$25,000 to \$47,000; reported to improve Pythian Castle.

Ky., Paducah.—Paducah Shrine Club, R. R. Guthrie, Prest., will erect Shriners' Temple; definite plans not decided.

Ia., Bogalusa.—W. R. Burk, New Orleans, prepared plans for building to contain lodge-room, etc. (See Stores.)

Miss., Greenville.—R. P. O. E. abandoned plans to erect building or remodel present structure. (Previously noted.)

Tex., Gonzales.—William Tell Lodge, Herman Sons, will erect lodge building; 40x60 ft.; frame.

Va., Newport News.—A. F. and A. M. postponed erection of Masonic temple until next year; Ferguson, Calrow & Wrenn, Archts., Norfolk, Va. (Lately noted.)

## BANK AND OFFICE

Ga., Savannah.—German Mutual Fire Insurance Co. acquired Hibernia Bank Bldg. and is having plans prepared to remodel; 2 stories; brick; 30x90 ft.

Ia., Bogalusa.—W. R. Burk, New Orleans, prepared plans for building to contain offices, etc. (See Stores.)

Mo., Joplin.—J. Ferguson will soon call for bids to erect 3-story office building; 75x100 ft.; reported cost \$150,000; E. P. Madorie, Archt., 832 Reserve Bank Bldg., Kansas City.

Mo., St. Louis.—Pellegrin Construction Co. will erect brick office building; concrete foundation; cost \$3500; construction by owner.

N. C., Charlotte.—C. B. Bryant has plans by Charles C. Hook, Charlotte, for 3-story brick and concrete office building; 50x114 ft.; 17 offices on each floor; rough-texture brick with limestone trim; tiled floors and corridors; electric fixtures; steam heat, etc.; will soon call for bids.

N. C., Mars Hill.—Mars Hill Bank, R. S. Gibbs, Prest., will erect brick building; construction by local contractor. (See Machinery Wanted—Bank Fixtures; Vaults.)

Oklahoma, Oklahoma City.—W. T. Hale is reported to erect 16-story office building.

Oklahoma, Tulsa.—A. Y. Boswell, 506 N. Cheyenne St., will erect building for offices, etc. (See Stores.)

Tenn., Kingston.—Kingston Bank & Trust Co. will erect building; white-brick front.

Tex., Dallas.—A. T. Lloyd of Lloyd Advertising Agency, 1413 Marilla St., has plans by Woerner & Cole, 513 Sumpner Bldg., Dallas, for office and shop building; 50x30 ft.; face brick; asphalt roof; cement and edge-grain flooring; 6 skylights; gas and electric fix-

tures; hot and cold showers, etc.; cost \$3000; contractor will purchase materials.

Tex., Dallas.—Green Electric Co., 508 Exposition Ave., will erect 1-story brick office and warehouse building; gravel roof; cement floor; electric lights; will let contract in 30 days.

Mo., Kansas City.—Standard Milling Co. has plans by C. R. Dunbar, Houston, for office building; 50x60 ft.; hollow tile and brick; composition roof; wood floors; steam heat; electric lights; cost \$7500.

W. Va., Charleston.—Kanawha County Banking & Trust Co. is reported to let contract about Dec. 1 to erect 3-story-and-basement bank and office building; cost about \$200,000; Dennison & Illinois, Archts., 475 5th Ave., New York. (Lately noted.)

## CHURCHES

Ala., Anniston.—First Presbyterian Church will erect Sunday-school building; cost about \$12,000; W. F. Johnston, S. A. Russell, W. L. Little, Building Com.

D. C., Washington.—Nineteenth Street Baptist Church will expend \$20,000 to remodel building at 19th and I Sts. N. W.

Pa., Albany.—Presbyterian Church has plans by Harry W. Jones, Minneapolis, Minn., for building; 140x80 ft.; brick; tile or slate roof; cost \$30,000; bids opened about Jan. 1. Address J. M. Patterson, Putney, Ga. (Lately noted.)

Mo., Crane.—County voted \$50,000 courthouse bonds. Address County Comms.

Mo., Bowling Green.—Pike County voted \$100,000 bonds to erect courthouse; C. M. Davis, County Clerk. (Previously noted.)

## COURTHOUSES

Mo., Crane.—County voted \$50,000 courthouse bonds. Address County Comms.

Mo., Bowling Green.—Pike County voted \$100,000 bonds to erect courthouse; C. M. Davis, County Clerk. (Previously noted.)

## DWELLINGS

Ala., Birmingham.—Vrendenburgh Sawmill Co. will erect about 25 dwellings; wants bids from contractors for labor.

Ala., Montgomery.—Mrs. E. K. Glazier will expend \$3000 to repair burned residence.

D. C., Washington.—Harry A. Kite, 133 G St. N. W., has plans by Geo. T. Santmyers, 92½ New York Ave., Washington, for 7 dwellings at Montana Ave. and 12th St., 1012 and 1016 to 1022 Montana Ave.; 2 stories; brick; cost \$34,000.

D. C., Washington.—R. H. Serrogins, 627 Florence St. N. E., will erect residence; cost \$3150.

D. C., Washington.—John M. Henderson, 1415 F St. N. W., has plans by Landvoigt & Cook, 1403 New York Ave., Washington, for four 2-story brick dwellings; cost \$12,000.

Fla., New Port Richey.—D. W. Anderson will erect 8-room stucco residence.

Ga., Atlanta.—J. N. Renfro will erect two 2-story brick-veneer residences; cost \$10,000; day labor.

Ga., Metter.—W. M. New will erect residence.

Ga., Savannah.—George D. Semken will erect 2-story frame residence.

Ky., Louisville.—Consolidated Realty Co. will erect residence; brick veneer; cost \$3500.

La., Shreveport.—F. C. Bringmann will erect residence; 2 stories; stucco and frame; asphalt shingle roof; cost \$3000; Seymour Van Os, Archt., Ward Bldg., Shreveport.

La., Shreveport.—Mrs. John Meyer is having plans prepared by Seymour Van Os, Ward Bldg., Shreveport, to erect residence; 2 stories; pressed brick; tile roof; electric fixtures; cost \$10,000.

Md., Baltimore.—Frank Novak has plans by Callis & Callis, 2055 Kennedy Ave., Baltimore, for 29 two-story dwellings on N. Streeter St.; 13x65 ft.; cost \$18,000.

Md., Baltimore.—Jan. B. Yeatman has plans by Stanislaus Russell, 2300 Clifton Ave., Baltimore, for 16 two-story brick dwellings at 1001-31 N. Bentall St.; 19x32 ft.; cost \$30,000.

Md., Baltimore.—City Real Estate Co., 11 E. Fayette St., acquired site at Tioga Pl. and Liberty Rd. and will erect 22 two-story dwellings; cost about \$70,000.

Md., Baltimore.—Standard Oil Co., Pratt and Commerce Sts., contemplates erecting number dwellings at Canton.

Md., Baltimore.—Renlex Realty Co., Morris Silberstein, Mgr., has plans by Stanislaus Russell, 2300 Clifton Ave., Baltimore, for 11 2-story brick dwellings at Presbury and Paulaski Sts.; nine 20x30 ft., one 24x45 ft., one 21x30 ft.; cost \$20,000.

Md., Catonsville.—Severn R. Alnutt, Beaumont Ave., Baltimore, plans to erect residence in the spring.

Md., Stevenson.—A. Stanley Zell is having plans prepared by Theodore Wells Pietsch, 1210 American Bldg., Baltimore, for 2½-story stone residence at Rodgers Station.

## CITY AND COUNTY

Ark., Kensett.—Municipal.—City will erect 1-story concrete building; Goodwin & Jean, Archts., Kensett; bids opened Nov. 15.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Miss., Jackson.—W. B. Parks, Merigold, Miss., will erect manager's residence, bungalow for own use, horse barn, install sewerage and water-works, light plant, etc.; contract let Nov. 20; Raymond B. Spencer, Archt., 205-06 New Millarp Bldg., Jackson.

Miss., Meridian.—H. T. Anderson, P. O. Box 13, Meridian, will erect residence; 6 or 7 rooms; exterior concrete; interior wood and plaster; tile roof; double wood floors with paper in center; chimneys with open fireplaces; cost \$2500 to \$3000; electric lights about \$150; plans and construction by owner; will replace burned structure.

Mo., Kansas City.—Kansas City Rys. Co. will erect number of dwellings for employees. (See Railway Stations, Sheds, etc.)

Mo., Kansas City.—Eich & Jennings will erect 2-story frame dwelling; cost \$3000.

Mo., Kansas City.—W. P. Hovey will erect 2-story brick dwelling; cost \$10,000.

Mo., Kansas City.—Agee-Block Realty & Building Co. is having plans prepared by White & Dean for 6 dwellings; English and Western type; will also erect three 6-apartment flats.

Mo., Kansas City.—Wells Bros. Co., Waldheim Bldg., will erect 20 dwellings; bungalows and Queen Anne type.

Mo., Kansas City.—J. A. McDonald will erect residence; 2 stories; brick; cost \$800.

Mo., St. Louis.—Cornelia C. Kelly will erect 2-story tenement; cost \$5000.

Mo., St. Louis.—C. A. Pfleiffer will erect 2-story dwelling; brick; cost \$4200.

Mo., St. Louis.—South Side Building Co. will erect two 2-story tenements; cost \$10,000.

Mo., St. Louis.—A. W. L. Weber will erect residence; bungalow type.

Mo., St. Louis.—F. E. Parrish will erect 2-story residence; brick; cost \$4000; construction by owner.

Mo., St. Louis.—Charles Gundlach and C. I. Swinhart will erect 4 bungalows; 6 rooms; hardwood floors; water heat; brick front porches; sun porches rear; 32 ft. frontage; cost \$14,000; plans by Mr. Swinhart.

Mo., St. Louis.—J. Charles Mueller will erect four 2-story dwellings; brick; cost \$13,200; construction by owner.

N. C., Charlotte.—Suburban Realty Co. will erect 2 dwellings 6 and 7 rooms; cost \$6000.

Okl., Henryetta.—James Hawes will erect residence.

Okl., Oklahoma City.—D. B. Ellis will erect 2 residences; frame; cost \$4000.

Okl., Oklahoma City.—Mrs. Bernice K. McDonald will erect residence; 2 stories; brick; cost \$4000.

Okl., Tulsa.—R. M. Darnell will erect 1-story brick residence; cost \$3000; construction begun.

Okl., Tulsa.—F. W. Holmes is erecting 2-story frame residence; cost \$5000; completion by Jan. 1.

Okl., Tulsa.—Joe Kenton will erect 2-story brick residence; cost \$5000.

Okl., Tulsa.—L. C. Wells will erect residence; 2 stories; frame; cost \$3000; completion in 60 days.

Tenn., Chattanooga.—H. H. Eager has plans by Will Campbell, Chattanooga, for residence; 48x40 ft.; brick veneer; asphalt shingle roof; pine and hardwood floors; electric lights; cost \$6000; hot-water heat, about \$800. Address owner.

Tenn., Knoxville.—Toms & Harth acquired site on Magnolia Ave. and will erect number dwellings.

Tex., Amarillo.—Smith & Townes, Amarillo, are preparing plans for residence.

Tex., Dallas.—A. R. Eckert, 5202 Goldst St., will erect residence; electric lights; owner will purchase materials.

Tex., Dallas.—Emma H. Vantine will erect addition to building at 2925 Hall St.; cost \$3000.

Tex., Dallas.—J. A. Moore will erect 16-room frame residence; 2 stories; cost \$6000.

Tex., Dallas.—J. D. Cullum will erect residence; 7 rooms; 2 stories; frame; cost \$3000.

Tex., El Paso.—Ramey Bros. will erect tenement in Magoffin addition; cost \$3000.

Tex., Dallas.—C. Guidera will erect \$10,000 residence in Belmont; construction begun.

Tex., Dallas.—C. B. Adams of Ewalt & Adams will erect residence in Mt. Auburn.

Tex., Dallas.—Jenkins-Cobb Lumber Co. will erect dwelling in Belmont; 8 rooms; frame; cost \$3500.

Tex., Dallas.—S. A. Lynch will erect 8-room 2-story frame residence; also 10-room 2-story frame residence; cost \$5500.

Tex., Dallas.—W. R. Lynch will erect 8-room 2-story frame dwelling; also erect addition to dwelling at 1021-1/2 E. 8th St.; cost \$4500.

Tex., El Paso.—George Look will erect 2 tenements at 10th and Broadway Sts.; will also erect building on South Stanton St.; cost \$12,000.

Tex., El Paso.—Walter Spittley & Son will erect 5 bungalows; cost \$10,500.

Tex., El Paso.—Perry-Kirkpatrick Realty Co. will erect three 5-room bungalows on Hastings and Trowbridge Sts., Government Hill; four 4-room bungalows on Rio Grande St., and two 2-story residences in 2300 block Montana St.; cost \$33,500.

Tex., El Paso.—Chas. Leavell has plans by S. E. Patton, 709 Caples Bldg., El Paso, for residence; red pressed brick; shingle roof; white maple floors; electric lights; hot blast heating system; cost \$3900.

Tex., Fort Worth.—John C. Ryan, Jr., will erect 6-room 1-story brick residence; also 3-room 2-story tile residence; cost \$12,500.

Tex., Houston.—Mrs. P. B. Carter will erect 6-room residence; cost \$3100.

Tex., Houston.—W. C. Selby will erect residence; 8 rooms; cost \$3000.

Tex., Lubbock.—Smith & Townes, Amarillo, Tex., are preparing plans for residence near Lubbock.

Tex., Paris.—Ed Allen will erect 2-story frame residence; cost about \$5000.

Tex., Paris.—J. J. Culbertson will erect 2-story tile and stucco residence; cost \$3000.

Tex., San Antonio.—A. G. Dugger will erect residence; cost \$8500.

Tex., Sulphur Springs.—Dr. Fleming has plans by Geo. E. Blumenauer, Sulphur Springs, for frame residence; cost about \$4500.

Va., Richmond.—Realty & Finance Corporation will erect 2-story frame stucco dwelling at 1730 Hanes Ave.; cost \$4500; construction by owner.

Va., Richmond.—Hugh L. Cooke will erect 2-story stucco and frame residence; cost \$4000.

Va., Richmond.—Davis Land Co. will erect 3-story brick and stucco dwelling; cost \$15,000.

Va., Richmond.—Virginia Realty & Construction Co. will erect residence on Denny St.; brick; cost \$3000.

Va., Richmond.—Roland Park Corporation will erect stucco and shingle residence on Moss Side Ave.; cost \$5500.

## GOVERNMENT AND STATE

Miss., Gulfport—Exposition.—Mississippi Centennial Exposition receives bids until Nov. 27 to erect coliseum, arts and craft, manufacturers', efficiency and woman's educational buildings; total cost, \$260,000; P. J. Krouse, Meridian, Miss.; M. W. Overstreet, Jackson, Miss., and Nolan & Perre, New Orleans, Archts. (Lately noted.)

Tex., Fort Sam Houston—Kitchen.—Captain Charles Abel, Constructing Quartermaster, receives bids until Nov. 28 to improve Hospital kitchen, to include plumbing, wiring, fixtures, etc.

## HOSPITALS, SANITARIUMS, ETC.

Ala., Birmingham.—Birmingham Infirmary has plans by Ben Price, 518-9 Empire Bldg., Birmingham, for building; 2 stories and basement; 107x75 ft.; brick and mill construction; tin roof; ordinary floors; direct steam heat; cost \$50,000; construction by day labor, begun.

Ky., Bowling Green.—City and county are reported considering erecting hospital; cost \$50,000. Address The Mayor or County Comrns.

Okl., Tulsa.—Catholic Sisters are reported to erect \$100,000 hospital; Rev. John G. Helling, pastor of Holy Family Catholic Church, is interested.

Tex., Dallas.—Texas Baptist Memorial Sanitarium is considering erecting additional story to present building.

## HOTELS

Fla., St. Petersburg.—W. D. Fauchette, Ch. Engr. Seaboard Air Line Ry., Norfolk, Va., states he does not know of any proposed hotel to be erected by company at Davista. (Lately noted considering erecting hotel.)

Ga., Savannah.—Joseph Hull is reported to have acquired De Soto Hotel for \$350,000 and to extensively remodel, furnish, etc.

Okl., Ardmore.—Wright & Wright, Kansas City, Mo., are preparing plans for \$200,000

hotel. (Ardmore Hotel Co. previously noted to erect hotel.)

Okl., Tulsa.—A. Y. Boswell, 506 N. Cheyenne St., will erect building for rooming house, etc. (See Stores.)

Okl., Wilson.—B. E. Moberly will erect hotel; 3 stories; brick.

Tex., Abilene.—R. S. Glenn is preparing plans and will soon let contract for hotel; 2 stories; 50x130 ft.

Tex., Dallas.—Cobb & Crofford Co. are reported to erect 50-room apartment hotel; 4 stories; tile or brick; electric fixtures; steam heat; electric elevator; cost \$70,000.

## MISCELLANEOUS

Ala., Dothan—Stables.—M. F. Pridgen and Marvin Holman of Headland, Ala., will erect livestock stables; brick construction; cost about \$15,000.

Fla., Jacksonville—Restaurant.—J. R. Walsh, Jacksonville, is preparing plans for remodeling building and adjoining portion of Hotel Albert building, to be occupied by Chilis Dining Hall Co.

Fla., Sarasota—Clubhouse.—Old New England Club, W. W. Savage, Secy. Treas., will erect clubhouse.

Ga., Dalton—Clubhouse.—Dalton Country Club will remodel 10-room brick residence for clubhouse; solid brick walls throughout; cedar shingle roof; hardwood floors; city electric lights; cost \$5000. Address H. L. Smith, Secy. of club.

Mo., Kansas City—Baby Welfare.—Minute Circle is considering erecting 2-story baby welfare station.

Okl., Muskogee—Clubhouse.—Spavinaw Fishing & Hunting Club, H. L. Traber, Prest., will soon receive bids to erect clubhouse; 2 stories; frame.

Okl., Oklahoma City—Clubhouse.—Rotary Club is reported to erect \$50,000 building.

Tex., San Antonio—Stable.—Pierce-Fordyce Oil Co. will erect stable; cost \$3700.

## RAILWAY STATIONS, SHEDS, ETC.

Mo., Kansas City.—Kansas City Rys. Co., 1500 Grand Ave., will erect 5 car barns; provide gymnasiums and shower baths; also erect number dwellings for employees.

Tex., Fort Worth.—Gulf Colorado & Santa Fe Ry., F. Merritt, Chief Engr., Galveston, Tex., is reported to expend \$100,000 for freight terminals and other improvements.

Va., Norfolk—Atlantic Coast Line Ry., J. E. Willoughby, Ch. Engr., Wilmington, N. C., will erect passenger station; 48x132 ft.; brick; composition roof; tile floors; steam heat; electric lights; plans by G. M. Poley, A. C. L. Bldg., Wilmington; construction begins about Jan. 1. (Lately noted.)

## SCHOOLS

Fla., Tampa.—Southern Conservatory of Music has plans by A. H. Johnson, Box 732, Tampa, for conservatory building; 30x75 ft.; 2 stories; brick walls; asphalt and gravel roof; joist and double wood floors; fuel-gas heat; cost \$5000. Address architect. (Lately noted.)

Fla., Vero.—County Board of Education contemplates erecting school; 1 story; brick and hollow tile or concrete; 12 classrooms, etc.; auditorium to seat 400; cost \$25,000; considering tentative plans by F. H. Trimble, Orlando, Fla.

Ga., Augusta.—City voted \$100,000 bonds to erect Tubman High School for Girls; fireproof; fire escapes; heating plant; electric lights; 20 classrooms, science laboratories, 2 study halls, assembly hall to seat 300, library 22x32 ft., locker-rooms; program signal clock, with program signal bell in each room; laboratories supplied with gas, water and electric current; 2 sanitary drinking fountains on each floor, etc. (Lately noted to receive plans until Nov. 15.)

Ga., Griffin.—City receives bids until Nov. 25 to erect school and remodel other buildings; G. H. Smith, Mayor. (Lately noted to have voted \$65,000 bonds.)

Ga., Oglethorpe University.—Oglethorpe University will erect clubhouse; 40x50 ft.; cement and wood construction and floors; wood roof; other details not determined.

Ga., Rome.—Darlington School acquired De Soto Park property and will erect building.

Ky., Ashland.—City voted \$200,000 bonds for schools. Address The Mayor.

Ky., Newport.—City defeated \$150,000 bonds to erect high school. (Lately noted.)

Ky., Paducah.—City is reported to vote this month on \$270,000 school bonds. Address The Mayor.

Ia., Carencro.—School Trustees plan to erect building; cost about \$30,000; S. J. Breaux, member of Com.

Md., College Park.—Maryland State College of Agriculture has plans by Flournoy & Flournoy, 1517 H St. N. W., Washington, D. C., for buildings, to include 3-story structure about 60x200 ft.; auditorium annex 50x35 ft.; two 1-story annexes 40x50 ft.; 1-story annex 50x80 ft.; fireproof; slate roof; cost about \$170,000.

Md., McDonogh.—McDonogh School Trustees, E. Stanley Gary, Prest., Equitable Bldg., Baltimore, opens bids Nov. 20 to erect Jane Bay Home for Boys; plans by Kenneth M. Murchison, 101 Park Ave., New York, call for 3 stories and basement; brick; slate roof; hardwood floors; steam heat; electric lights; cost \$50,000; following contractors are estimating: W. E. Harn Co., 213 Calvert St.; Cowan Building Co., 101 W. Madison St.; Edward Brady & Son, 1113 Cathedral St.; G. Walter Tovell, Eutaw and McCulloch Sts.; D. M. Andrew Co., Mt. Vernon Ave. and 26th St.; Gladfelter & Chambers, 729 Roland Ave., all of Baltimore. (Previously noted.)

Md., Oakland.—Oakland School Dist. defeated \$30,000 bonds for school. (Lately noted.)

Miss., Hollandale.—Trustees have plans by Raymond B. Spencer, 205-06 New Millarp Bldg., Jackson, Miss., for school and principal's residence; former brick; composition roof; steam heat; electric lights; plumbing and septic tank; latter frame; bids opened Dec. 15; cost \$25,000; plans from Archt.

Miss., Jackson.—Hinds County Supervisors will erect agricultural high school; issued \$30,000 school bonds.

Miss., New Albany.—City, S. W. Beville, Clerk, voted \$10,850 bonds to erect annex to high school. (Previously noted.)

Mo., Cameron.—Missouri Wesleyan College Trustees will rebuild liberal arts building and president's residence noted damaged by fire at loss of \$65,000.

Mo., St. Louis.—St. Margaret's Catholic Church will erect school. (See Churches.)

Mo., St. Louis.—City voted \$3,000,000 bonds for schools, to include Alexander Hamilton School; 2 stories; 24 classrooms to accommodate 1200 pupils; fireproof, except mill-construction roof; mart face brick facing; stone trim; cost \$222,000; also following schools: Bircher, Bircher St. and Semple Ave.; Canterbury, 7124 Canterbury Ave.; Clifton Heights, Old Manchester Rd. and Sulphur Ave.; Cupples, Kingshighway and Cote Brilliante; Devonshire, Macklin and Lansdowne Aves.; Kingshighway and Penrose; Lindendwood, McCausland and Lindendwood; Long, Morgan Ford Rd. and Walsh St.; Neosho, Grand Ave. and Neosho; Penrose, Clayton Rd. and Central Ave.; Roe, Mitchell Ave., near Prather; Shenandoah, Shenandoah and Louisiana; Stix, Duncan and Euclid; Woodward, Alabama and Bates; Northwestern High School, Kingshighway and San Francisco Ave. Negro—Cottage, to replace portable buildings on Cottage Ave., and Garnett, 5400 Buller Ave. (Lately noted.)

N. C., Wake Forest.—Wake Forest School Dist. votes Dec. 19 on \$25,000 bonds to erect school. Address Dist. School Trustees.

Okl., Ada.—Board of Education, D. W. Swofford, Clerk, will erect school; 2 stories and basement; brick; 76x16 ft.; stone trimmings; cost \$13,000; Hawk & Parr, Archts., Security Bldg., Oklahoma City. (Lately noted.)

Okl., Bartlesville.—City voted \$100,000 bonds to erect school; F. E. Thurman, Clerk, Board of Education. (Previously noted.)

Okl., Bristow.—Board of Education has plans by C. E. Hair, Levy Bldg., Oklahoma City, for school building, for which \$12,000 bonds were voted.

Okl., Holdenville.—Dist. No. 29, W. D. Brown, Clerk, will erect addition to school near Lamar

Okl., Muskogee.—County Comrns. will erect school in Dist. No. 35; 1 story; frame; Elmer Coon, Chmn.

S. C., Woodruff.—Selma School Dist. will erect school; 2 classrooms and auditorium; Barney S. Haynes, County Supt. of Education, Spartanburg, S. C.

Tenn., Bristol.—Sullivan College Trustees plan to issue \$100,000 bonds to rebuild college; A. D. Reynolds, H. G. Peters, W. H. Cox and others interested. (Previously noted.)

Tex., El Paso.—University of Texas plans to rebuild main building of School of Mines; late noted damaged by fire; loss \$20,000.

November 16, 1916.]

## MANUFACTURERS RECORD.

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Tex., Houston.—School Board, P. W. Horn, Supt., adopted tentative plans by Sanguinet, Staats & Gottlieb, First National Bank Bldg., Houston, for senior high school; 4 stories; brick; 300 ft. frontage; swimming pool, 30x75 ft.; emergency hospital with 3 beds; seating capacity of auditorium 2000; domestic science and manual training equipment; will petition city council for \$850,000 bond issue to include \$60,000 for building; \$150,000, site; \$60,000, equipment; \$100,000 for sites and buildings for one or more elementary ward schools. (Lately noted.)

Tex., Paris.—City receives bids until Nov. 27 to erect high school to cost \$150,000; 2 stories and basement; revised plans by Sanguinet & Staats, Fort Worth, and Barry, Smith & Withers, Paris. (Lately noted.)

Tex., Politecnic.—School Board receives bids through John J. Pollard, Archt., 715-717 Fort Worth National Bank Bldg., Fort Worth, until Nov. 29 to erect 2-story brick school; plans on file at office of architect as above.

Tex., San Antonio.—Marist Brothers will erect 3-story school; cost \$50,000.

Va., Lynchburg.—Brookville Dist. School Board rejected all bids to erect addition to West Lynchburg School; project abandoned for present; W. R. Burnham & Co., Archts., Lynchburg. (Noted in August.)

Va., Petersburg.—City acquired site and will erect negro school building. Address The Mayor.

W. Va., Wheeling.—School Board, Frank Stanton, Clerk, has plans by F. F. Faris, Wheeling, for repairs to building for domestic science; Carey roofing; wood floors; hot-air heat; cost about \$300. (Lately noted.)

## STORES

Ark., England.—J. K. Brodie is having plans prepared by J. H. Bliss, Southern Trust Bldg., Little Rock, for 6-story building.

Ark., Magness.—B. A. Smith will rebuild business building.

D. C., Washington.—Robert Lee O'Brien, V. P. and Treas. Belt, O'Brien & Co., 1309 G St. N. W., will erect 2-story brick store; cost \$7000.

Fla., Jacksonville.—G. M. Boyd Co. will erect building; 2 stories; brick veneer; cost \$300.

Ga., Metter.—Kingery & Bland contemplate erecting store.

Ga., Metter.—Mrs. B. Parrish will erect 2 or more stores.

Ga., Metter.—W. W. Williams will erect store building.

La., Bogalusa.—W. R. Burk, New Orleans, prepared plans for 2-story Cassidy Bldg. to contain 4 stores, 9 offices and lodge room; 5-ft. frontage.

La., Lake Charles.—Sam Levy will erect building; brick; 25x100 ft.; cost \$15,000.

La., Baton Rouge.—J. Simon has plans by H. Charlton, Jr., Baton Rouge, for 3-story brick and terra cotta building.

Md., Baltimore.—Fred Baurenschmidt has plans by B. F. Zipp, 601 Professional Bldg., Baltimore, for 2-story brick store and dwelling at 607 Forrest St.; 30x35 ft.; cost \$3000.

Miss., Inverness.—J. B. Baird is receiving bids to erect 2-story brick building; 100x33 ft.

Mo., Kansas City.—J. Spector will erect 2-story brick business and apartment building; cost \$6000.

Mo., St. Louis.—M. Schmidt will erect 2-story store and residence; cost \$4000.

Mo., St. Louis.—F. J. Cornwell Realty Co. will erect business apartment building; 3 stories; fireproof; 4 stores on first floor; 14 suites of 2 rooms, bath and kitchenette above; cost \$11,250.

Okl., Enid.—J. S. Featherston and Frank Weller is reported to erect business building; brick.

Okl., El Dorado.—Way Hardware Co. will erect brick business building.

Okl., Jenks.—Wm. George, Propri. Cash Store, will erect business building; 2 stories; brick; 25x80 ft.; bids being received.

Okl., Tulsa.—A. Y. Boswell, 506 N. Cheyenne St., will erect lately-noted building for store, office and rooming house at 123 S. Main St.; 24x140 ft.; 6 stories; brick and stone; tar and gravel roof; tile and wood floors; natural gas heat; gas and electric lights; cost about \$35,000 or \$40,000; sidewalks, \$50; elevators, \$2500; plans by owner; construction by day labor. (See Machinery Wanted—Plumbing Equipment.)

Tenn., Bristol.—John A. Mahoney of Mahoney-Jones Co. acquired Harmeling Theater and will remodel for business building; erect 1-story addition; install front, etc.; Thos. S. Brown, Archt., Bristol.

Tenn., Kingston.—James Newhouse will erect brick building.

Tex., Dallas.—Marcus L. Crane will expend \$6670 to erect addition and remodel building at 604-10 3d Ave.

Tex., Dallas.—T. W. Scollard & Son will repair and improve building at 1528 Main St.; remove vault, install new flooring, refurbish and repair walls and ceiling, provide new front, etc.

Tex., El Paso.—L. W. Hoffecker will expend \$3000 for repairs to building at 107 San Antonio St.

Tex., El Paso.—China Palace, Harry Hyman and E. Sanders, Mgrs., will erect building; 5 stories.

Tex., El Paso.—Mrs. J. L. James is reported to erect buildings on El Paso and Eighth Sts.

Tex., Paris.—W. O. Richey will erect business building; cost \$3000.

Tex., Port Arthur.—Port Arthur Grain Co. will erect brick business building; cost \$10,000.

Tex., San Antonio.—Miss Ella Felder will erect store building; cost \$5000.

Tex., San Antonio.—R. T. Pruitt and Edward Lamm will erect business building; brick; 2 stories and basement; fireproof; 112x75 ft.; concrete floors; upper floor for cigar factory; lower floor and 65-ft. rear addition for storage of chemicals.

Tex., Texico.—Smith & Townes, Amarillo, Tex., prepared plans for 3-story business building.

Tex., Waco.—T. J. Primm will erect business building, similar to structure under construction; 2 buildings to be 100x165 ft.; cost \$15,000 each.

Va., Clifton Forge.—J. A. Frazier is reported to rebuild structure occupied by C. A. Olphin and noted damaged by fire.

Va., Norfolk.—N. Block, owner of building occupied by Twin City Iron Works and Nor-

folk Hide & Metal Co., will erect 3-story brick building to replace structure noted burned at loss of \$22,000.

Va., Norfolk.—Louis E. Hall will erect building to replace structure noted damaged by fire at loss of \$8000.

Va., Norfolk.—Mrs. R. M. Wilkinson and Seldon Taylor will rebuild structure noted burned at loss of \$35,000.

Va., Phoebe.—C. C. Mugler will erect store building in Meilen St.

Va., Richmond.—W. A. Cheatwood will erect brick store; cost \$4000.

W. Va., Wheeling.—Albert M. Schenk of F. Schenk & Sons Co., is reported to erect fireproof business building at 1114-18 Market St.

## THEATERS

Fla., Jacksonville.—J. J. Murdock, Executive Mgr. of Keith Circuit and United Booking Office, New York; Jake Wells of Atlanta, Ga.; E. F. Albee, New York, and others, are reported to erect vaudeville theater to cost \$125,000 to \$175,000; construction begins in spring.

Ga., Dalton.—J. B. Brown will remodel theater.

## WAREHOUSES

Fla., Jacksonville.—Florida Cotton Oil Co. will erect warehouse; cost about \$15,000.

Md., Baltimore.—J. E. Moxley, Jr., 1709 Edmondson Ave., is preparing plans for 5-story brick and reinforced concrete warehouse on Eastern Ave.; 103x200 ft.

Md., Baltimore.—Schoneman estate is having plans prepared by Benj. Frank, 328 N. Charles St., Baltimore, for remodeling warehouse at 319 W. Baltimore St.; new front; 5 stories; 25x130 ft.

Okla., Ardmore.—Harold Wallace will erect warehouse to be occupied by Bass Furniture Co.; brick; 50x75 ft.

Tenn., Chattanooga.—Chattanooga Warehouse & Compress Co. will erect addition to warehouse; cost \$8000.

Tex., Dallas.—Green Electric Co., 508 Exposition Ave., will erect warehouse and office building. (See Bank and Office.)

## BUILDING CONTRACTS AWARDED

## APARTMENT-HOUSES

D. C., Washington.—Dr. R. A. Pyles, Nichols Ave., Anacostia, D. C., let contract to S. E. Snyder, 2232 Q St., S. E. Washington, to erect apartment-house at 14th St. and Good Hope Rd.; 35x43 ft.; brick and concrete; flat roof; wood floors; electric lights; cost \$6000; cement sidewalks, \$100; J. G. Herbert, Archt., 1944 Naylor Rd., Washington; also let contracts to J. E. Taylor Co., 813 14th St. N. W. Washington, for electric work and wiring, and to Lacy & Belt, 493 G St. S. W., Washington, for plastering. (Lately noted under Dwellings.)

Fla., Miami.—H. G. Ralston let contract to erect building for stores and apartments. (See Stores.)

Fla., West Palm Beach.—Mrs. J. L. Catchings, Chicago, let contract to W. V. Jones, West Palm Beach, to erect 4-story apartment house.

N. C., West Raleigh.—Dr. J. R. Rogers and Henry T. Hicks let contract to erect apartment-house, etc. (See Stores.)

S. C., Greenville.—Raven I. McDavid let contract to Charley Klocker, Greenville, to erect apartment-house; 51x80 ft.; 2 stories; frame, with brick veneer; tar and gravel roof; wood floors, except the porch floors; cost \$13,000; heating plant (down-draft boiler), \$1050; electric lighting, \$300; Martin & Ward, Archts., Greenville; construction begins No. 23. (Lately noted.)

Tex., Dallas.—J. W. Dixon will erect apartment-house; 14 rooms; 2 stories; frame; cost \$4000; E. T. Sale, Contr., West 9th St., Dallas.

Tex., El Paso.—Dr. A. L. McKnight let contract to Mayfield Building & Improvement Co., El Paso, to erect apartment-house at Montano and Cedar Sts.; five 5-room suites; cost \$12,000.

Tex., Fort Worth.—U. M. Simon let contract to W. J. Webb, Fort Worth, to erect apartment-house; 16 rooms; 2 stories; frame; cost about \$35,000 or \$40,000; sidewalks, \$50; elevators, \$2500; plans by owner; construction by day labor. (See Machinery Wanted—Plumbing Equipment.)

Tex., Dallas.—J. A. Moore let contract to W. G. Aston, Dallas, to erect apartment-house; 20 rooms; 4 suites; frame; brick columns; reinforced concrete foundation; screens; electric fixtures, etc.; cost \$7500; Buell Planing Mill Co., Dallas, will purchase materials.

Archi., Charleston. (Contractor lately noted to have permit to remodel building.)

Tex., Quanah.—First Guaranty State Bank let contract to Tom Lowell & Sons to erect bank building; 2 stories and basement; 25x110 ft.; face brick and terra cotta; the floors; 7-ft. marble wainscote; cost \$30,000; Field & Clarkson, Archts., Wichita Falls and Fort Worth.

## CHURCHES

Ark., Forrest City.—Methodist Church, Rev. J. F. E. Bates, pastor, let contract to W. J. Brewer to erect building; brick and stone; cost \$25,000.

S. C., Greenville.—Christ Church let contract to John Reynolds, Greenville, to erect additions for Sunday-school and parish-house; frame, with brick veneer; wood and tin roof; hardwood and oak floors; cost \$3000; Martin & Ward, Archts., Greenville. (Lately noted.)

Tenn., Clarksville.—First Baptist Church let contract to Foster-Creighton Co., Nashville, Tenn., to erect building; stone face; brick backing; 5-ply Barrett roofing; wood, cork carpet floor; cost \$55,000; low-pressure steam heat, \$3000; John Galsford, Archt., Memphis, Tenn. Address contractor. (Lately noted.)

Tex., Carlton.—Baptist Church let contract to erect building. Address The Pastor.

Va., City Point.—St. John's Episcopal Church let contract to Keynton Construction Co., P. O. Box 48, Petersburg, Va., to erect addition to and remodel building; sliding or rolling partitions; stained-glass windows; baptismal font. (See Machinery Wanted—Rolling Partitions; Stained-Glass Windows; Baptismal Font.)

Va., Petersburg.—St. Paul's Episcopal Church let contract to Keynton Construction Co., P. O. Box 48, Petersburg, to remodel and erect addition to building; sliding or rolling partitions; stained-glass windows; baptismal font; tile and marble chancel. (See Machinery Wanted—Rolling Partitions; Stained-Glass Windows; Baptismal Font.)

W. Va., Huntington.—Fifth Avenue Baptist Church let contract to Longest & Tessier Co., Greensboro, N. C., at approximately \$17,000, exclusive of heating, plumbing, hard trimming, glazing and lighting; Greek style; seating capacity 1400; green tile roof; total cost about \$150,000; R. H. Hunt, Archt., Chattanooga, Tenn.; E. N. Alger, Supvr. Archt., Huntington. (Lately noted.)

## CITY AND COUNTY

Ga., Cordele.—Library.—Cordele Carnegie Library Trustees let contract to Eugene C. Wachendorff, Atlanta, to erect addition to and improve library; plans include 14-ft. rear addition; cost \$10,000. (Lately noted.)

Okla., Tulsa.—Jail.—City let following contracts: At \$12,297 to Beers Construction Co., Tulsa, to remodel Hickok livery barn for jail; at \$4500 to Manly Jail Works, Dalton, Ga., to install 14 steel cells; completion about Jan. 1. (Lately noted.)

Tex., Paris.—Jail.—Lamar County let contract to Pauly Jail Building Co., St. Louis, to furnish equipment for jail building; material to cost \$17,000; building to be structural steel, brick and marble; high pressure heat; electric fixtures; elevator; Sanginetti & Staats, Fort Worth, and Barry, Smith & Withers, Paris, Archts. (Previously noted.)

Va., Staunton.—Jail.—County Comr. let contract to G. W. Fretwell, Staunton, to remodel jail to include 5 new cells; new plumbing system; additional porches, etc.; cost \$6000 to \$7000.

## DWELLINGS

Ala., Montgomery.—Dr. C. G. Lasle let contract to D. F. Gorrie & Son, Montgomery, to erect 2-story frame and brick residence; cost \$700.

D. C., Washington.—C. E. Hood has plans by Macneil & Macneil and let contract to R. P. Whitty & Co., both of Union Trust Bldg., Washington, to erect 2-story hollow tile dwelling; cost \$11,000.

Fla., Arcadia.—Mrs. Lela A. Royal let contract to D. L. Lence & Co., Arcadia, to erect \$300 bungalow on Magnolia St.

Fla., Leesburg.—Frank H. Bourlay let contract to J. E. DeVaughn, Leesburg, to erect residence; 24x73 ft.; wood; asphalt shingle roof; cost \$3500; lighting, \$75; W. H. Carr, Archt., Leesburg. Address owner.

Fla., Jacksonville.—J. N. Cowart let contract to A. L. Clayton, Jacksonville, to erect residence; 10 rooms; 30x40 ft.; frame; asphalt shingle roof; wood floors; fireplaces and gas heat; city electric lights; cost \$7500; D. N. Hyer, \$3700. (Lately noted.)

**Fla., Lakeland.**—C. O. Beckman let contract to F. W. Mercer, Lakeland, to erect residence; frame; composition roof; oak floors; 8 rooms and 2 baths; tile bathroom floors; electric lighting; cost \$450.

**Fla., West Palm Beach.**—W. L. Herndon let contract to W. V. Jones, West Palm Beach, to erect residence.

**Fla., West Palm Beach.**—Niel Campbell let contract to W. V. Jones, West Palm Beach, to erect residence on Carlborg Court.

**Ga., Atlanta.**—A. M. Bergstrom, Third National Bank, has plans by and let contract to C. T. Norris, 45 Garden St., Atlanta, to erect residence; 6 rooms; frame; shingle roof; warm-air heat; cost \$750.

**Ga., Augusta.**—R. L. Rockwell has plans by and let contract to Lawrence Construction Co., 127 8th St., Augusta, to erect residence; 41x632.6 ft.; 31x9-ft. terrace; front, side and rear porches; hollow tile and brick; asphalt roof; wood floors; hot-air heat; electric lights; cost \$700.

**Ga., Macon.**—H. M. Wortham let contract to W. D. Griffin, Macon, to remodel residence; stucco finish; sleeping porch, conservatory, etc.; cost \$3000; Curran R. Ellis, Archt., Macon.

**Ga., Milledgeville.**—L. D. Smith let contract to W. P. Frazier, Milledgeville, to erect dwelling; 42x48 ft.; frame; metal roof; wood floors; electric lights; cost \$3500. (Lately noted.)

**Ga., Morgan.**—J. E. Martin let contract to O. B. Hines, Albany, Ga., to erect residence.

**Ky., Paducah.**—Ed. Toof let contract to B. T. Davis, Paducah, to erect bungalow; basement and garage; Paducah brick with raised joints; plans by and construction under supervision of Sherrill-Russell Lumber Co., Paducah.

**Ky., Paducah.**—L. S. Dubois let contract to Gus Lockwood, Paducah, to repair residence on Clay St.; plans by and construction under supervision of Sherrill-Russell Lumber Co., Paducah.

**La., New Orleans.**—Adrien Villa let contract to Morris Sazer to erect \$4000 residence.

**Md., Baltimore.**—Roland Park Co. has plans by E. L. Palmer, Jr., Munsey Bldg., and let contract to Gladfelter & Chambers, 729 Roland Ave., both of Baltimore, to erect six 2-story brick dwellings at 40th and Duluth Sts.; 28x40 ft.; cost \$50,000.

**Md., Baltimore.**—James Keelty has plans by and let contract to D. C. Slonaker, 1056 W. Fayette St., Baltimore, to erect seven 2-story dwellings in 600 block Calverton Rd.; five 13x40 ft.; one 24x30 ft.; other 13x40.5 ft.; cost \$9800.

**Md., Baltimore.**—Paul B. Miles has plans by N. E. Horn, 2810 N. Calvert St., and let contract to L. Schonlein, 2217 E. Baltimore St., both of Baltimore, to erect 5 dwellings at 5703-05-07-09-11 Chesnut Rd.; frame; 42x23 ft.; three to be 1 story and attic; two, 2 stories and attic; cost \$18,000.

**Md., Baltimore.**—Samuel A. Ver Valen has plans by and let contract to Geo. R. Morris, Title Bldg., Baltimore, to erect dwelling at 3307 Powhatan Ave.; 42x90 ft.; brick; cost \$20,000.

**Md., Catonsville.**—Wm. M. Powell let contract to Wm. L. Brooks, Reisterstown Rd., near Slade Ave., to erect frame cottage on Melvin Ave.; cost \$3500.

**Mo., St. Louis.**—J. Halub let contract to erect store and dwelling. (See Stores.)

**N. C., Hertford.**—Thomas Hixon let contract to Campbell & Perry, Hertford, to erect residence; colonial style; 10 rooms; cost \$7000; J. A. Campbell, Archt., Edenton, N. C.

**N. C., West Raleigh.**—Dr. J. R. Rogers and Henry T. Hicks let contract to Perry-Kirkpatrick Realty Co., El Paso, to erect 5-room \$4000 bungalow.

**Tex., Dallas.**—J. W. Kimbrough let contract to Klein Bros., Dallas, to erect 2-story concrete residence in Belmont; construction begun.

**Tex., Dallas.**—W. H. Burk will erect residence in Belmont; cost \$3000; contract let.

**Tex., El Paso.**—Ben Powell let contract to Perry-Kirkpatrick Realty Co., El Paso, to erect 5-room \$4000 bungalow.

**Tex., Dallas.**—J. J. Cooper, 4027 Victor St., will erect residence; cost \$3500; S. A. Shepherd, Contr., Dallas.

**Tex., El Paso.**—W. P. Brady let contract to Geo. W. Sharp, El Paso, to erect residence; 5 rooms; 40x40 ft.; red pressed brick; shingle roof; maple flooring; electric lights; hot-blast heating plant; cost \$4000; S. E. Patton, Archt., 509 Caples Bldg., El Paso. (Lately noted.)

**Tex., El Paso.**—W. H. Hull is reported to have let contract to Perry-Kirkpatrick Realty Co., El Paso, to erect 7-room bungalow; cost \$5000.

**Tex., Houston.**—G. L. Noble let contract to Max Wogenknecht, Houston, to erect residence; stucco, shingle roof; hardwood floors; hot-air heat; electric lights; cost \$9000; J. W. Northrup, Jr., Archt., Houston. (Lately noted.)

**Tex., San Antonio.**—V. R. Hood has plans by and let contract to E. Offinger, San Antonio, to erect residence; brick; heavy tin roof; hardwood floors; gas heat; cement sidewalks; cost \$10,000; construction begun.

**Tex., San Antonio.**—E. R. Richardson, Box 920, has plans by and let contract to Sam Friedman, San Antonio, to erect 4 bungalows; frame; shingle roof; pine floors; electric lights; cost \$6000. (Lately noted.)

**Tex., San Antonio.**—John F. Howard, 920 Grayson St., has plans by and let contract to W. A. Baily, Castillo St., San Antonio, to erect residence; 2 stories; 9 rooms; frame; shingle roof; hardwood maple floors; city electric lights; cost \$5000. (Lately noted.)

**Va., Virginia Beach.**—F. S. Royster, Norfolk, let contract to R. E. Johnson, Virginia Beach, to erect residence; 2½ stories; cost about \$15,000; Ferguson, Calrow & Wrenn, Archts., Virginia National Bank Bldg., Norfolk.

**Okla., Oklahoma City.**—Cecil Hardeman has plans by Maurice Jayne and let contract to Stewart & Wilderson, both of Oklahoma City, to erect residence; frame; mill construction; brick mantels; cost \$3000; contractor will purchase material.

**Okla., Oklahoma City.**—Dr. White has plans by Maurice Jayne and let contract to Stewart & Wilderson, both of Oklahoma City, to erect 2-story 8-room residence; cost \$5800.

**Okla., Oklahoma City.**—Classen Co. let contract to Stewart & Wilderson, Oklahoma City, to erect residence; 2 stories; 8 rooms; 28x36 ft.; frame; oak floors; furnace heat; cost \$5000; Maurice Jayne, Archt., Oklahoma City; contractor will purchase material.

**Okla., Oklahoma City.**—James Sinopoulos let contract to E. Huffman to erect resi-

dence; 1 story; 30x58 ft.; cost \$2000; Maurice Jayne, Archt., Oklahoma City; construction begun.

**Okla., Oklahoma City.**—Stewart & Wilderson, Oklahoma City, have contract to erect 3 dwellings; cost \$6000; Maurice Jayne, Archt., Oklahoma City.

**Okla., Oklahoma City.**—John Edwing let contract to Stewart & Wilderson, Oklahoma City, to erect 3 dwellings; 6 rooms; 30x40 ft.; frame; mill construction; oak floors; gas and electric fixtures; cost \$7500; Maurice Jayne, Archt., Oklahoma City; contractor will purchase material.

**Okla., Oklahoma City.**—William Rexwood has plans by Maurice Jayne and let contract to Stewart & Wilderson, both of Oklahoma City, to erect residence; 1 story; 30x46 ft.; cost \$3200.

**Okla., Oklahoma City.**—W. F. Green let contract to C. E. Frye to erect 2-story residence; 32x42 ft.; cost \$6000; Maurice Jayne, Archt., Oklahoma City.

**Okla., Oklahoma City.**—William Nance let contract to Stewart & Wilderson, Oklahoma City, to erect 4 residences; cost \$10,000; Maurice Jayne, Archt., Oklahoma City.

**Okla., Tulsa.**—Mrs. E. Eckert let contract to erect frame residence at 17th and Detroit Sts.

**Tex., Dallas.**—Mrs. B. Cassidy let contract to A. E. Brunson, 2700 Hibernia St., Dallas, to erect residence; 2 stories; 11 rooms; frame; cost \$1000.

**Tex., Dallas.**—T. F. Weaver, 308 S. Winnetka St., let contract to W. W. Weaver, Dallas, to erect residence; 2 stories; 8 rooms; cost \$3350.

**Tex., Dallas.**—J. W. Kimbrough let contract to Klein Bros., Dallas, to erect 2-story concrete residence in Belmont; construction begun.

**Tex., Dallas.**—W. H. Burk will erect residence in Belmont; cost \$3000; contract let.

**Tex., El Paso.**—Ben Powell let contract to Perry-Kirkpatrick Realty Co., El Paso, to erect 5-room \$4000 bungalow.

**Tex., Dallas.**—J. J. Cooper, 4027 Victor St., will erect residence; cost \$3500; S. A. Shepherd, Contr., Dallas.

**Tex., El Paso.**—W. P. Brady let contract to Geo. W. Sharp, El Paso, to erect residence; 5 rooms; 40x40 ft.; red pressed brick; shingle roof; maple flooring; electric lights; hot-blast heating plant; cost \$4000; S. E. Patton, Archt., 509 Caples Bldg., El Paso. (Lately noted.)

**Tex., El Paso.**—W. H. Hull is reported to have let contract to Perry-Kirkpatrick Realty Co., El Paso, to erect 7-room bungalow; cost \$5000.

**Tex., Houston.**—G. L. Noble let contract to Max Wogenknecht, Houston, to erect residence; stucco, shingle roof; hardwood floors; hot-air heat; electric lights; cost \$9000; J. W. Northrup, Jr., Archt., Houston. (Lately noted.)

**Tex., Houston.**—V. R. Hood has plans by and let contract to E. Offinger, San Antonio, to erect residence; brick; heavy tin roof; hardwood floors; gas heat; cement sidewalks; cost \$10,000; construction begun.

**Tex., San Antonio.**—E. R. Richardson, Box 920, has plans by and let contract to Sam Friedman, San Antonio, to erect 4 bungalows; frame; shingle roof; pine floors; electric lights; cost \$6000. (Lately noted.)

**Tex., San Antonio.**—John F. Howard, 920 Grayson St., has plans by and let contract to W. A. Baily, Castillo St., San Antonio, to erect residence; 2 stories; 9 rooms; frame; shingle roof; hardwood maple floors; city electric lights; cost \$5000. (Lately noted.)

**Tex., San Antonio.**—F. S. Royster, Norfolk, let contract to R. E. Johnson, Virginia Beach, to erect residence; 2½ stories; cost about \$15,000; Ferguson, Calrow & Wrenn, Archts., Virginia National Bank Bldg., Norfolk.

**Tex., San Antonio.**—Cecil Hardeman has plans by Maurice Jayne and let contract to Stewart & Wilderson, both of Oklahoma City, to erect residence; frame; mill construction; brick mantels; cost \$3000; contractor will purchase material.

**Tex., San Antonio.**—Dr. White has plans by Maurice Jayne and let contract to Stewart & Wilderson, both of Oklahoma City, to erect 2-story 8-room residence; cost \$5800.

**Tex., San Antonio.**—Classen Co. let contract to Stewart & Wilderson, Oklahoma City, to erect residence; 2 stories; 8 rooms; 28x36 ft.; frame; oak floors; furnace heat; cost \$5000; Maurice Jayne, Archt., Oklahoma City; contractor will purchase material.

**Tex., San Antonio.**—James Sinopoulos let contract to E. Huffman to erect resi-

## HOSPITALS, SANATORIUMS, ETC.

**Okla., Fairfax.**—Drs. D. A. and J. G. Shoun let contract to Chas. Hazen, Fairfax, to erect hospital building.

## HOTELS

**Okla., Washington.**—G. W. McCord let contract to G. S. Zeppe, 235 Southern Bldg., Washington, to erect 4-story brick hotel; cost \$35,000.

**Fla., Pass-a-Grille.**—Pass-a-Grille Hotel let contract to Beard-French Co., St. Petersburg, Fla., to enlarge and improve hotel; plans include 34 additional rooms, erection of 2-story amusement building, covered pergola, enlarged lobby and dining-room, new kitchen, etc.; cost \$25,000; Bonfoey & Elliott, Archts., Tampa, Fla.

**Okla., Port Wentworth.**—Port Wentworth Lumber Co., controlled by Savannah River Lumber Co., Savannah, Ga., let contract to A. A. Artley, Savannah, to erect hotel; 80 rooms; wood and concrete; 2 stories; cost about \$25,000. (Previously noted.)

## MISCELLANEOUS

**Tenn., Tullahoma.**—Dormitory.—Board of Managers, Tennessee Vocational Reformatory for Girls, let contract to Rogers Construction Co., Chattanooga, to erect dormitory; 30x90 ft.; fireproof; slate roof; vapor heat; Henry Hibbs, Nashville.

## SCHOOLS

**Fla., Sorrento.**—Trustees let contract to Battle Lumber Co., Sorrento, to erect school building.

**La., Lake Charles.**—Calcasieu Parish School Board, F. M. Hamilton, Supt., let contract to H. C. Collins to erect school; 4 rooms; frame; cost \$3669.

**La., New Orleans.**—City let contract to John O. Chisholm, 406 Hennen Bldg., New Orleans, to erect school; 1 story and basement; frame; Barrett roof; sanitary floor; cost \$26,240; heating plant, \$3500; lighting, \$800; E. A. Christy, Archt., City Hall, New Orleans. (Lately noted.)

**Miss., Charleston.**—Trustees Tallahatchie County Agricultural High School let contract at \$20,000 to Ben G. Sanders, Charleston, to erect dormitory and administration building; brick; 2 stories; administration building to have 7 or 8 classrooms and auditorium; dormitory, 28 rooms; electric lights; steam heat; Mahan & Broadwell, Archts., Germania Bank Bldg., Memphis, Tenn. (Lately noted.)

**Mo., Joplin.**—School Board let contract at \$14,553 to Galloway & Gish Plumbing & Heating Co., Kansas City, Mo., for plumbing for high school for which Dieter & Wenzel Construction Co., Joplin, and Wichita, Kan., have general contract at \$195,293; Smith, Ren & Lovitt, Archts., Kansas City, Mo.; completion about Jan. 1, 1918. (Lately detailed.)

**N. C., Raleigh.**—School Board let contract to erect 2-room school in Panther Branch Township No. 4; will also erect school in Swift Creek and White Oak Consolidated districts.

**Okla., Tulsa.**—Board of Education, H. O. McClure, Prest., let contract at \$3885 to Hammons & Jones, Tulsa, to erect 2 rooms and assembly hall.

**Tenn., Nashville.**—Board of Education, William Nelson, Chmn. Com., let contract at \$5,784 to Fulcher Brick Co., Nashville, to erect Warner School; 80x235 ft.; brick; wood joists; stone trimmings; Barrett specification roof; double floors; wired for outside current; steam heat, about \$8000; Asmus & Norton, Archts., 634 Stahlman Bldg., Nashville. (Lately noted.)

**Tex., Hamby.**—School Board let contract to J. L. Scott, Abilene, Tex., to erect 1-story school; 60x75 ft.; face brick; tar and gravel roof; wood floors; metal ceiling; contractor will purchase materials; David S. Castle, Archt., Abilene.

**Tex., Sherman.**—W. C. Hedrick Construction Co., Dallas, Tex., general contractor to erect high school, let following additional sub-contracts: Steel, Trussed Concrete Steel Co., Youngstown, O.; painting, W. B. McDonald, Sherman; sand and gravel, North Texas Sand & Gravel Co.; ornamental iron, Southern Wire and Iron Works, Atlanta; 168x140 ft.; fireproof; Barrett pitch and gravel roof; cement and edge grain yellow pine floors; Dunham heating system; city lighting; cost \$65,343; C. H. Page & Bro., Archts., Austin, Tex.; S. B. Elliott, Associate Archt., Sherman. (Lately noted to have let plumbing contract.)

**Tex., El Paso.**—James A. Dick Grocery Co. let contract to R. I. Rushing, El Paso, to rebuild and enlarge store building lately burned; finished structure will be 4 stories and basement; brick and mill construction; asphalt gravel roof; wood floors; hydraulic electric return elevator system; cost \$30,000; Gibson & Robertson, Archts., El Paso.

**Tex., Laredo.**—August C. Richter let contract to Chas. M. Schoenfeld, Laredo, to erect lately-noted store building; 180x105 ft.; reinforced concrete; Barrett roofing; cement slab and maple floors; natural-gas heat; Otis freight elevator; cost \$70,000; L. Harrington

## STORES

**Fla., Miami.**—H. G. Ralston let contract to Will A. Otter, 402 Ave. D, Miami, to erect building for 5 stores and 5 apartments; 50x75 ft.; 2 stories; reinforced concrete; asbestos 4-ply roof; wood floors; cost \$10,000; J. L. Schulthorpe, Archt., 10th St. and Ave. C, Miami. (Lately noted.)

**Ga., Cartersville.**—Chas. D. Smith, Rome, Ga., let contract to J. H. McElreath, Cartersville, to erect store building; 31x31 ft.; brick; Johns-Manville roofing; wood floors; stoves; city electric lights; cost \$3500; A. Cook, Archt. (Lately noted.)

**Mo., Macon.**—Schwartz & Paul let contract to W. D. Griffin, Macon, to remodel brick building; will install plumbing and sheet-metal work, cement floors, plate-glass front, etc.

**Mo., St. Louis.**—J. Halub let contract to Geo. C. Reid, St. Louis, to erect 2-story store and dwelling; brick; cost \$4000.

**N. C., Ahoskie.**—J. A. Copeland has plans by and let contract to D. L. Thomas, Ahoskie, to erect store building; 42x72 ft.; brick; tin roof; red pine floors; cost \$20,000; electric lights, \$3000. Address contractor.

**N. C., Hamlet.**—W. R. Land and J. R. Gordon let contract to J. W. Stout, Sanford, N. C., to erect 3-story store and office building; cost \$30,000. (Lately noted.)

**N. C., Hertford.**—J. H. Towne let contract to Campbell & Perry, Hertford, to erect store building; 30x90 ft.; copper front; marble base; J. A. Campbell, Archt., Edenton, N. C.

**N. C., Hertford.**—J. Broughton & Bro. let contract to erect theater and store building. (See Theaters.)

**N. C., Oxford.**—J. G. and A. S. Hall let contract to Leo E. Byrum, Oxford, to erect building; brick; steel, Indiana limestone and area lights used in construction.

**N. C., West Raleigh.**—Dr. J. R. Rogers and Henry T. Hicks let contract to W. T. Clay, Raleigh, to erect store building 70x140 ft., apartment-house 36x40 ft. and residence 25x36 ft.; brick; tile and slate roof; wood tile floors; electric lights; cement sidewalks and vault lights; cost \$25,000; central steam heating plant, \$3000; R. I. Pool, Archt., West Raleigh, N. C.

**Okla., Norman.**—Harold F. Snell, 215 W. Boyd St., has plans by and let contract to Holmboe Construction Co., Oklahoma City, to erect building for University Students' Supply Store; solid brick; 46x80 ft.; tin (imitation tile) roof; concrete basement floor; upper floors pine; 1-pipe gravity return steam heat; electric lights; cost \$15,000. Address owner. (See Machinery Wanted-Soda Fountain, etc.; Store Fixtures.)

**S. C., Columbia.**—I. Silver Bros. Co. let contract to F. D. McNulty, Columbia, to erect 3-story brick store building; 50x130 ft.; stucco front; plate-glass windows; elevators; steam heat; plate-glass mirrors; cost \$19,000; construction begun.

**Tenn., Kingston.**—Wilson & Sons have plans by and let contract to G. A. Newman, Kingston, to erect store building; 44x70 ft.; brick; asphalt composition roof; hardwood floors; electric lights; concrete sidewalks; cost \$2750.

**Tenn., Kingston.**—T. E. Ebien has plans by and let contract to Jno. Martin, Kingston, to erect store building; 37x70 ft.; brick; asphalt composition roof; hardwood floors; electric lights; concrete sidewalks; cost \$2500.

**Tenn., Dallas.**—J. E. Craddock let contract to J. M. Jones, Dallas, to erect business building; 40x70 ft.; brick; cost \$4300.

**Tex., Dallas.**—J. F. Zang, 901 N. Zang's Blvd., let contract to J. D. Smith, Dallas, to erect business building; brick; 40x150 ft.; cost \$3000; construction begun.

**Tex., Dallas.**—Ben Abon, 1000 Camp St., let contract to Rodgers, Johnson & O'Rouke to erect brick business building; 36x100 ft.; cost \$6000.

**Tex., Dallas.**—L. A. Stemmons let contract to Geo. Bridges, Dallas, to erect business building; 1 story; concrete; cost about \$800; owner will purchase materials.

**Tex., El Paso.**—James A. Dick Grocery Co. let contract to R. I. Rushing, El Paso, to rebuild and enlarge store building lately burned; finished structure will be 4 stories and basement; brick and mill construction; asphalt gravel roof; wood floors; hydraulic electric return elevator system; cost \$30,000; Gibson & Robertson, Archts., El Paso.

**Tex., Laredo.**—August C. Richter let contract to Chas. M. Schoenfeld, Laredo, to erect lately-noted store building; 180x105 ft.; reinforced concrete; Barrett roofing; cement slab and maple floors; natural-gas heat; Otis freight elevator; cost \$70,000; L. Harrington

**Co. Archt., San Antonio, Tex.** Address owner. (See Machinery Wanted—Electric-light Plant.)

**Tex. Roscoe.**—J. M. Radford let contract to J. M. Morgan, Big Springs, Tex., to erect business building; 1 story; 60x90 ft.; face brick and stone; tar and gravel roof; concrete floors; metal ceiling; tile vestibule; electric fixtures; contractor will purchase materials; David S. Castle, Archt., Abilene, Tex.

**Tex. Sweetwater.**—Rufus Wright let contract to Sam Goodrum to erect business building for Household Furniture Co.; brick; 75x120 ft.; plate glass front; cost \$10,000.

**W. Va., Northfork.**—Sol Hyman & Sons, Keystone, W. Va., will remodel building for department store and office building; 30x70 ft.; Barrett roof; steel beams and wood joists; steam heat from central power-house; electric lights; cost \$10,000; let contract for excavation and masonry to Geo. Bailey; other contracts not let; Pedigo & Garry, Archts., Bluefield, W. Va.

### THEATERS

**Md. Baltimore.**—James Goeller has plans by Wm. C. Ritz and let contract to William Gaken, 2339 McElroy St., Baltimore, to erect 1-story brick addition to moving-picture

theater at 1444 Hull St.; 21.4x27 ft.; cost \$2000.

**N. C. Hertford.**—J. Broughton & Bro. let contract to Campbell & Perry, Hertford, to erect theater and store building; 2 stories; 60x92 ft.; J. A. Campbell, Archt., Edenton, N. C.

### WAREHOUSES

**Ga., Macon.**—Bibb Manufacturing Co. let contract to W. D. Griffin, Macon, to erect warehouse; brick; 50x200 ft.; cost \$3700. (Lately noted.)

**Md. Baltimore.**—Renous, Kleinle & Co. let contract to Consolidated Engineering Co., 243-59 Calvert Bldg., Baltimore, to erect 4-story brick warehouse on Frederick Rd.; cost \$30,000.

**Md. Baltimore.**—Boston Iron & Metal Co. let contract to Price Concrete Construction Co., Maryland Trust Bldg., Baltimore, to erect 1-story warehouse at Fremont Ave. and King St.; brick and iron truss; 22x77 ft.; Carly asbestos roof; concrete floors; electric lights; Blanke & Zink, Archts., Equitable Bldg., Baltimore. (Lately noted.)

**N. C. Gastonia.**—Long Bros. will erect warehouse; 2 stories; brick; 55x60 ft.; brick; the roof; wood floors; cost \$4000; lighting about \$50; elevator about \$650; J. E. McAlister, Contr., Gaston; to be occupied by Rankin-Armstrong Co.

## MACHINERY, PROPOSALS AND SUPPLIES WANTED

**Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.**

### "WANTS"

**Air Compressor.**—John G. Duncan Co., 38 W. Jackson Ave., Knoxville, Tenn.—Dealers' prices, quick shipment, on steam-driven air compressor, capacity about 100 cu. ft. at 10 lbs. pressure; consider larger capacity at suitable price.

**Air Compressor.**—Robt. R. Nixon Co., Chattanooga, Tenn.—Dealers' prices on second-hand air compressor, 1200 cu. ft. capacity, 100 to 125 lbs. pressure, power drive connected to 220 or 440-volt 60-cycle A. C. motor; latest type with feather valve preferred.

**Art Glass.**—See Building Materials.—Walter H. Dodd.

**Bank Fixtures.**—Mars Hill Bank, R. S. Gibbs, Prest., Mars Hill, N. C.—Prices on bank fixtures, safes, vaults, etc.

**Baptismal Font.**—Keynton Construction Co., P. O. Box 48, Petersburg, Va.—Prices on baptismal fonts for churches at Petersburg and City Point, Va.

**Boiler (Water-tube).**—City of Slater, Mo., J. A. Stern, City Clerk.—Prices on 350 H. P. water-tube boiler, at least 100 lbs. working pressure; specifications obtainable from L. E. Shepherd or from City Clerk.

**Boiler.**—Andre Bon, Pointe-a-Pitre, Guadeloupe.—Proposals with price, and, above all, date of delivery for horizontal, tubular return flame, boiler with 300 square meters heating surface, together with accessories, such as check damper (register); grill fire doors; fire armature; safety reverse clock; valve; direct and indirect steam outlet (one for escape); boiler built to operate with refuse (a bagasse); gratings, armature, and doors adapted to that system of furnace; mean steam pressure adapted to be 5 kilos per cubic centimeter.

**Boilers.**—United States Engineer Office, St. Louis, Mo.—Bids until Dec. 6 to furnish combination water and fire-tube marine boilers for stern paddle-wheel towboat.

**Bridge.**—Board Commrs., J. M. Buckley, Commr. Streets and Public Property, Pawhuska, Okla.—Bids until Dec. 4 to construct reinforced concrete bridge across Bird Creek; length 510 ft., consisting of 100-ft. main span of open spandrel arch type construction, and 20 spans of 20-ft. each on the approach, curved T beam type; steel of old bridge to be used for reinforcing concrete where practical; plans, specifications, etc., with J. M. Buckley, Commr., and set of plans obtainable from him for \$10.

**Bridge Construction.**—Lauderdale County Commrs., J. F. Koonce, Judge of Probate, Florence, Ala.—Bids until Dec. 10

to construct bridge over Little Cypress Creek near Sharp's Mill, and one over Second Creek at Sledge Ford; plans and specifications on file with Probate Judge.

**Bridge Construction.**—F. D. Henderson, Secy. Chamber of Commerce, Gainesville, Tex.—Data and suggestions relative to proposed \$50,000 to \$60,000 bridge.

**Bridge Construction.**—Wetzel County Commrs., S. Myers, Clerk, New Martinsville, W. Va.—Bids until Nov. 17 to construct concrete bridge across Willey Fork of North Fork of Fishing Creek, about ½ mi. above Kingtown, Grant Dist.; plans and specifications from State Road Bureau, Morgantown, W. Va.

**Bridge Construction.**—Highway Dept., Board of State Engrs., Room 104, New Orleans Court Bldg., New Orleans, La.—Bids until Dec. 4 to construct steel swing bridge across Bayou Des Allemands near Les Allemands; information as to location, character of work, etc., obtainable from Highway Dept., New Orleans.

**Bridge Construction.**—Etowah County Commrs., S. J. Cummings, County Engr., Gadsden, Ala.—Bids until Nov. 15 to construct concrete arch bridge of one 60-ft. span over Black Creek, near Gadsden; expenditure \$2000.

**Building Materials.**—Walter H. Dodd, Mocksville, N. C.—Prices on pressed brick, tile, art glass, rolling partitions for \$10,000 church building.

**Building Materials (Sand, Gravel, Crushed Stone, Millwork and Lumber).**—See Radio Station Equipment and Construction Supplies.—Newport Contracting & Engineering Co.

**Building Materials, etc.**—Henri Gobin, Constructor, Rouen, France.—Data, prices, etc., on materials for constructing "knock-down" houses, etc.; also prices on saws, saw sharpeners, woodworking machinery, etc.

**Buckets (Clam Shell).**—Jewel Supply & Equipment Co., 34 S. Calvert St., Baltimore, Md.—Two ½-yd. clam-shell buckets.

**Burners (Oil).**—Southern Drainage & Construction Co., C. W. Hodges, Gen. Mgr., Bayboro, N. C.—Information on burners for crude oil in Scotch marine boiler.

**Cars (Railroad, Box).**—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids on three 20-ton railroad box cars, schedule 274, delivery Pearl Harbor, H. T.

**Cars.**—See Railway Equipment.—Jewel Supply & Equipment Co.

**Cold-storage Plant.**—Florence Chamber of Commerce, H. A. Smith, Pres., Florence, S. C.—Data with plans, specifications and prices on cold-storage plant; capacity 50 beehives, 100 hogs, 500 crates eggs, 1000 bush. potatoes, and car of butter, cheese and lard.

**Concrete Seawall.**—Bond Commission, Jos. F. Cazeneuve, Chmn., Bay St. Louis, Miss.—Bids until Dec. 1 to construct about 701 ft. concrete seawall and filling behind seawall with sand; about 11,365 cu. yds.; separate bids; plans and specifications prepared by David U. Harris, Engr., Mobile, Ala., are obtainable on application to Chmn. Bond Commission for \$5 per set.

**Cotton Goods.**—Louis A. Abreu, 54 Arzobispo Merino, Santo Domingo.—Agency for manufacturer of cheap cotton goods—drilling, muslins, etc.

**Crane, etc.**—Bureau Supplies and Accounts, Navy Dept., Washington, D. C.—Bids until Nov. 28 for delivering locomotive crane, Japan drier, hardware and lard oil at Navy-yard, Norfolk. Apply for proposals to supply officer, Navy-yard, Norfolk, or to Bureau.

**Crusher.**—Jewel Supply & Equipment Co., 31 S. Calvert St., Baltimore, Md.—No. 3 stationary jaw or gyratory crusher.

**Curb and Gutter Machines.**—E. E. Blessing, Contr., Timpson, Tex.—Data and prices on machine to form or mold combined curb and gutter—the machine to slide on the curb and gutter forms, shaping mortar on top coat to exact shape of curb and gutter combined.

**Drills (Core).**—A. H. Wood, Braman, Okla.—Data and prices on core drills used in core drilling without diamonds; want such as used in drilling wells for elevator plunger and geological tests.

**Electric Generator.**—Carteret Lumber Co., Beaufort, N. C.—300 K. W. D. C. generator.

**Electric Motor.**—See Mining (Cont) Machinery.—West Virginia White Ash Coal Co., L. R. Reese, Pres., Huntington, W. Va.—6-ton storage electric motor.

**Electric Motor.**—White Furniture Co., McBaine, N. C.—10 H. P. motor; A. C., 220-volt, 60-cycle, 3-phase, 800 to 1000 R. P. M.

**Electric Motor.**—See Air Compressor.—Robt. R. Nixon Co.

**Electric-light Plant.**—August C. Richter, Laredo, Tex.—Prices on electric-lighting plant with storage batteries for \$70,000 store building.

**Electrical Equipment.**—Thos. W. Gould, Arlington, Tenn.—Prices on 15 K. V. A. generator and copper wire.

**Electrical Machinery.**—Clarke County Light & Ice Co., Dual Wright, Mgr., Jackson, Ala.—60 K. W. 2300-volt 60-cycle 3-phase generator and switchboard, instruments and exciter; first-class second-hand condition; name price and date of delivery.

**Electrical Machinery.**—See Engine (Hoisting).—John G. Duncan Co.

**Engine (Hoisting).**—John G. Duncan Co., 308 W. Jackson Ave., Knoxville, Tenn.—Dealers' prices on 35 to 50 H. P. triple or three-tandem-drum, 3-phase, 60-cycle, 220-volt electric hoisting engine; triple or three-tandem-drum steam hoisting engine of above power, if cannot furnish electric hoisting engine.

**Engine (Traction, Steam).**—O. Ross Pearson, Keyesville, Va.—12-15 H. P. steam traction engine; new, or used if good condition.

**Fruit and Produce Brokerage Commission Supplies.**—Goldsboro Fruit & Produce Co., Goldsboro, N. C.—Fixtures, etc., for fruit and produce brokerage and commission business.

**Galvanizing Plant.**—Hillyer-Sperring Co., wooden ship builders, Box 371, Jacksonville, Fla.—Data on installation of galvanizing plant and prices on equipment.

**Heating Plant.**—Allegany County Board of Education, Edward F. Webb, Secy., 7 Union St., Westernport, Md.—Bids until Nov. 27 to install heating system in addition to Westernport High School; drawings and specifications on file with School Commrs., Westernport, and Geo. F. Sansbury, Archt., Cumberland.

**Hoisting Equipment.**—L. L. Burton, 1000 Main St., Fort Worth, Tex.—Two-drum belt-driven hoisting apparatus or outfit suitable to be driven by 30 H. P. oil engine; also 600 ft. 1½ in. cable and 1000 ft. % in. cable.

**Homogenizer.**—W. C. Newman, Farmville, Va.—Small homogenizer for ice-cream plant; state price, condition, make and how long used; new or second-hand.

**Kiln Turntable.**—Wilkesboro Mfg. Co., North Wilkesboro, N. C.—Turntable for dry-kiln.

**Levee Construction.**—Comms. Post-chaire Levee Dist., office Board of State Engrs., New Orleans, La.—Bids until Nov. 29 to construct Sarpy Levee, left bank Mississippi River, St. Charles Parish; contents 180,000 cu. yds.

**Locomotive.**—See Electric Motor.—West Virginia White Ash Coal Co.

**Locomotives.**—See Railway Equipment.—Jewel Supply & Equipment Co.

**Lockers.**—H. O. McClure, Pres., Board of Education, Tulsa, Okla.—Bids until Dec. 4 for construction and installation of lockers in new Central High School; plans and specifications at office Geo. Winkler, Archt., 414 Palace Bldg., Tulsa; bids may also be submitted to N. W. Mayginess, Chmn., Bidg. Com., care Supt. of Schools, High School Bldg., Tulsa.

**Lumber.**—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids on 29,600 ft. No. 1 clear sugar pine, schedule 368, delivery Washington.

**Machine Tools, etc.**—Panama Canal, Earl L. Brown, Gen. Purchasing Officer, Washington, D. C.—Bids until Dec. 2 to furnish dredge tumbler, engine truck springs, brake-shaft brackets, electric cable, wire, conduit and fittings, electric fittings, marine hardware and equipment, locks, bolts, hinges, hasps, screws, cutters, nuts, taper pins, drawer pulls, bed casters, files, dies, tackle blocks, chain blocks, shelf brackets, buckets, brooms, ice tongs, grindstones, tool handles, ladders, lanterns, lantern globes, soldering pots, tallow pots, spectacles, boring machine, milling machine, lathe, potato-peeling machine, refrigerator, mirrors, etc.; blanks, etc., relating to circular (No. 110) obtainable from this office or offices of assistant purchasing agents, 21 State St., New York; 614 Whitney-Central Bldg., New Orleans, and Fort Mason, San Francisco; also from U. S. Engr. offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash.

**Machinery, Machine Tools, etc.**—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids on 30-ton steam locomotive crane, schedule 376; two 5-ft. universal radial drills and one heavy-duty drill press, schedule 377; surface grinding machine and universal milling machine, schedule 362, delivery Washington; 24-in. turret lathe, schedule 365, and 2 steam windlasses, schedule 370, delivery Boston; machine for coating paper with solution for blue printing, schedule 379; oxy-acetylene machine and two punch press and riveting machines, schedule 363, delivery Norfolk; two turbine bucket cutting machines, schedule 378, delivery Newport; two steam steering machines, schedule 361, delivery Norfolk, Mare Island; two turbo-generating sets, schedule 364, delivery Charleston.

**Manufactured Products.**—Geo. Schow, Ovre Slotsgate 7, Christiania, Norway.—To represent American manufacturers seeking trade of Norway, Sweden, Denmark and Russia.

**Metal.**—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids on 2000 lbs. rod phosphor bronze, schedule 359, and 1600 lbs. head forgings, schedule 378, delivery Newport; 49,500 lbs. deep drawing steel discs and 159,000 lbs. steel boiler plates, schedule 368, delivery Norfolk; 85,000 lbs. nickel steel (D-3 hoops) forgings, schedule 368, delivery Washington; 10,000 lbs. steel castings, schedule 370, delivery Philadelphia.

**Metal Partition and Ceiling.**—J. D. Johnson, care Hotel Como, Hot Springs, Ark. Prices on 220 sq. yds. metal partition and 1000 sq. yds. suspended ceiling, or prices on following materials for same: 32,000 L. ft. ½-in. and 1000 ft. 2-in. channel iron studs, and 3200 sq. yds. 26 or 27-gauge metal lath, painted; freight allowed to Hot Springs.

**Meters, etc.**—Bureau Supplies and Accounts, Navy Dept., Washington, D. C.—Bids until Nov. 28 for delivering orsat apparatus, aneroid barometer, calorimeter, steam gauges, hot water and high-pressure meters, and thermometers at the naval station, Key West. Apply for proposals to supply officer, naval station, Key West, or to Bureau.

**Mining (Coal) Machinery.**—West Virginia White Ash Coal Co., L. R. Reese, Pres., Huntington, W. Va.—Sullivan short wall machine; 6-ton storage electric motor.

**Paving.**—City of Belhaven, N. C., W. B. Tooly, Mayor.—Bids until Nov. 29 to pave sidewalk on east side of Main St. from Tooly to Haslin St., ¼ mi.; specifications on file in Clerk's office.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

[November 16, 1916]

**Paving.**—City Comms., Knoxville, Tenn. Bids until Nov. 20 to pave Caswell St. (Dist. No. 128), Pruett Pl. (Dist. No. 130), Circle Drive (Dist. No. 122) and West End Pl. (Dist. No. 131); paving, 9600 sq. yds.; grading, 3400 cu. yds.; plans and specifications, including storm sewers and curb, obtainable from J. B. McCalla, City Engr.; John W. Fenniken, Commr. of Streets.

**Paving.**—Baltimore (Md.) Board of Awards, City Hall.—Bids until Nov. 22 to grade and pave various alleys with cement concrete; specifications and proposal sheets from R. M. Cooksey, Highway Engr., City Hall.

**Paving.**—City of Drumright, Okla., A. J. Fogale, Clerk.—Bids until Nov. 20 to construct vitrified brick pavement with single curb, according to specifications and plans at offices of City Clerk and City Engr.; about 34,500 sq. yds. paving, 10,000 lin. ft. curb, 8000 cu. yds. rock and 10,000 cu. yds. earth excavation, 1150 lin. ft. oak headers, 27 monument covers, 8 catch-basins, 4 manholes, 1400 lin. ft. 4-in. sub-drain, with 400 ft. 10-in. and 300 ft. 18-in. vitrified clay sewer, and 300 ft. 30-in. concrete sewer.

**Pipe and Fittings.**—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids on steel pipe, schedule 371, delivery Brooklyn; "A" valves, bodies, fittings, etc., schedule 378, delivery Newport; 60 2½-in. composition tees, 120 angle (cross and check) valves, 36 gate valves and ½-in. globe radiator valves, all schedule 358, delivery Puget Sound.

**Plumbing Equipment.**—A. Y. Boswell, 506 N. Cheyenne St., Tulsa, Okla.—Prices on plumbing equipment for \$35,000 store, office and rooming-house building.

**Pump.**—City of Okmulgee, Okla., R. H. Jenness, Commr. of Finance.—Prices on direct-connected electrically-driven pump with capacity of 1100 gals. per minute, to be accompanied by 11,240 ft. 10-in. pipe, probable effective diam. of 9 in., due to incrustations of lime and iron; present rate of pumping about 750 gals. per minute; present working pressure 55-60 lbs.; pump to be 41 ft. lower than discharge and work with suction line varying from 5-ft. suction to 10-ft. head; motor, 2300-volt, 60-cycle; prices are wanted for pump f. o. b. Okmulgee and installed.

**Rails.**—Wilkesboro Mfg. Co., North Wilkesboro, N. C.—One hundred ft. rail; second-hand will do.

**Rails.**—Huettel Coal & Coke Co., Norton, Va.—Minimum car of 30 tons 16-lb. relaying steel rails; prompt shipment.

**Radio Station Equipment and Construction Supplies.**—Newport Contracting & Engineering Co., Newport News, Va.—Prices on following materials for Government radio station at Key West, Fla. (for which this company has contract): Sand, gravel, crushed stone, millwork and lumber; also desires to sublet electric wiring and erection of 3 steel pipe masts 150 ft. high.

**Rails.**—Virginia Lead & Zinc Corp., Jas. H. Batcheller, Mgr., Jones Store, Va.—Prices on 50 or 60-lb. relaying rails.

**Railway Equipment.**—Jewel Supply & Equipment Co., 31 S. Calvert St., Baltimore, Md.—1½ mi. 21-in.-gauge 16-lb. portable track, 4 switches, 20 1-yd. dump cars and 1 24-in.-gauge dinky engine.

**Rails (Portable).**—General Utilities Co., 714 Paul-Gale-Greenwood Bldg., Norfolk, Va.—2 mi. 16-lb. 24-in.-gauge portable track; would receive bids on portion of track.

**Refrigerating Machinery.**—Dept. of Interior, Bo Sweeney, Asst. Secy., Washington, D. C.—Bids until Dec. 6 to furnish refrigerating machinery, move and remodel present refrigerating plant for St. Elizabeth's Hospital; plans and specifications obtainable.

**Road Construction.**—Highway Comms. of Beat 4 of Holmes County, Thornton, Miss. Bids until Nov. 25 to grade, raise and terrace with gravel road from Thornton to iron bridge at Shipp's pike, 4.2 mi.; profile, specifications and estimates on file with Snowden & Houser, Engrs., Durant, Miss.

**Road Construction.**—Ouachita Parish Board Supvs., Dist. No. 2, T. E. Flournoy, Chrmn., Monroe, La.—Bids until Dec. 15 to grade, drain and surface with gravel the following: Monroe Loop, 4.9 mi.; Monroe-Farmerville, 15.3 mi.; Morehouse Parish, 2.3 mi.; Monroe-Bastrop, 15.2 mi.; Old Vicksburg Rd., 5.6 mi.; each road to be separate contract except Morehouse Parish Rd.; plans and specifications on file office of

Engr., Monroe; information on request; J. W. Billingsley, Consult. Engr.; R. P. Boyd, Res. Engr.

**Road Construction.**—Board Supvs., Carl H. McHenry, Prest., Ouachita Parish, Dist. No. 1, Monroe, La.—Bids until Dec. 18 to grade, drain and surface with gravel the following: Monroe-Columbia Rd., 18.8 mi.; Monroe-Millhaven Rd., 6.11 mi.; separate contracts; plans and specifications on file office of Engr., Monroe; J. W. Billingsley, Consult. Engr.; R. P. Boyd, Res. Engr.

**Road Construction.**—Comms., Taylor Road Dist., Lafayette County, Oxford, Miss.—Bids until Dec. 1 to construct 14 mi. sand-clay road; plans and specifications on file office of Chancery Clerk, Oxford; J. E. Walker, J. C. Treloar and I. A. Tatums, Comms.; Snowden & Hauser, Engrs., Jackson and Columbus, Miss.; D. A. Hill, Jr., Res. Engr.

**Road Construction.**—Baldwin County Comms., Bay Minette, Ala.—Bids until Dec. 5 to grade, drain and surface with sand-clay part of State Trunk Rd. No. 12 between Perdido and Bay Minette; expenditure \$5000; W. S. Keller, State Highway Engr., Montgomery, Ala.; D. A. Hill, Jr., Res. Engr.

**Rolling Partitions.**—See Building Materials.—Walter H. Dodd.

**Rolling Partitions.**—Keynton Construction Co., P. O. Box 48, Petersburg, Va.—Prices on dozen sliding or rolling partitions for Sunday-schools in Petersburg and City Point, Va.

**Sawmill, etc.**—Cuba Lubricating Co., Cuba 65, Habana, Cuba.—Sawmill to install on hardwood timber land; also wants hemp twine, such as used for sewing sacks and tobacco bales.

**Sewer Construction.**—J. H. Dingle, City Engr., Charleston, S. C.—Bids until Nov. 18 to construct drains, sewers, sewerage-pumping station and cast-iron discharge line in Boulevard Area.

**Soda Fountain, etc.**—Harold F. Snell, 215 W. Boyd St., Norman, Okla.—Prices on 14-ft. soda fountain, fixtures for lunch counter and cafe, cigar fixtures and showcases.

**Sprinklers.**—Florida Fruit Products Co., Claude E. Street, Mgr., Haines City, Fla.—Prices on automatic sprinkler system, for installation in new plant for bottling grapefruit juice.

**Stained Glass Windows.**—Keynton Construction Co., P. O. Box 48, Petersburg, Va.—Prices on stained glass windows for churches in Petersburg and City Point, Va.

**Steel Pipe Masts.**—See Radio Station Equipment and Construction Supplies.—Newport Contracting & Engineering Co.

**Store Fixtures.**—See Soda Fountain, etc. Harold F. Snell.

**Time Watch.**—White Furniture Co., McNamee, N. C.—Stop watch for timing men and operations.

**Truck (Ladder).**—City of West Palm Beach, Fla., A. M. Lopez, Clerk.—Prices on ladder truck; will purchase Nov. 21.

**Twine (Hemp).**—See Sawmill, etc.—Cuba Lubricating Co.

**Vaults.**—See Bank Fixtures.—Mars Hill Bank.

**Water-works Equipment.**—City of Marlow, Okla., E. V. Roper, City Clerk.—Bids until Dec. 4 on following: 250 H. P. engine, steam or other type; if steam, then one suitable boiler, together with heater, pumps, valves, gauges, etc., for complete installation; 130 K. V. A. 2300-volt 60 cycle 3-phase alternator with exciter; alternator to be direct connected or belted; if belted, then exciter may be direct connected or belted; 1-panel switchboard, equipped; deep-well pump, capacity to lift 100 G. P. M. 300 ft.; motor for pump; pump to supply mains 50 G. P. M. against 200-ft. head; motor for this pump; 19,000 ft. 4-in. water pipe; hydrants, valves, etc.; bids received for all or parts.

**Wire Cable.**—L. L. Burton, 1000½ Main St., Fort Worth, Tex.—Six hundred ft. 1½ in. and 1000 ft. ½ in. cable. See Hoisting Equipment.—Thos. W. Gould.

**Wire (Steel, Flat).**—Utility Co., Hickory, N. C.—Correspondence with manufacturers of flat steel or rolled wire, about 1-32-in. (or less) thickness; will supply specifications; sample also with Manufacturers Record.

**Wire (Copper).**—See Electrical Equipment.—Thos. W. Gould.

**Woodworking Machinery.**—See Building Materials, etc.—Henri Gobinat.

## MANUFACTURERS RECORD.

## RAILROAD CONSTRUCTION

### RAILWAYS

Ark., Rogers.—W. B. Slaughter, Prest. Bankers' Trust Co., Dallas, Tex., and others are reported to have bought timber interests of the Ozark Lumber Co., and will build railroad 5 mi. long from Rogers to Monte Ne, Ark.

Fla., Pine Level.—Florida & Alabama Ry. has completed an extension from Pine Level to Whitley, Ala., about 12 mi.

Ga., Atlanta.—J. L. Murphy, Gas and Electric Bldg., Atlanta, and others publish petition for charter for the Atlanta & Anderson Ry. Co. to build a line from Atlanta, Ga., to Anderson, S. C., about 140 mi.; also for a parallel route (possibly alternative) between Decatur and Hoschton, Ga., about 50 mi.

While it is understood that electricity will be the motive power, it is not so definitely stated in the published petition. The Savannah River will be crossed at Brown's Ferry, about 6½ mi. from Hartwell, Ga. Route is as previously stated. Capital stock will be \$5,314,300 common and an equal amount of preferred shares. (See Manufacturers Record, November 9.)

Okla., Tulsa.—Tulsa Traction Co., capital \$100,000, will build 15-mi. line from Tulsa to Sapulpa, Okla.; work expected to start within 2 months. A. A. Small is Prest.

Okla., Strong City.—Cheyenne R. R. Co. is chartered to build a line 7 mi. long from

Strong City to Cheyenne, Okla. Capital \$10,000. Incorporators: J. C. Mytinger, L. T. Cranberry and J. R. Jones of Wichita Falls, Tex.; W. S. Haid and T. A. Cushman of Clinton, Okla.

S. C., Spartanburg.—Southern Railway will add two tracks to its receiving and classification yard at Hayne near Spartanburg, and will also add eight tracks to its storage-yard there, increasing the yards' capacity from 761 to 1860 cars. W. H. Wells, Washington, D. C., is Ch. Engr. of Constr.

Tenn., Chattanooga.—Cincinnati, New Orleans & Texas Pacific Ry. will build branch to the new industrial section in North Chattanooga, 7 or 8 mi. T. C. Powell, Cincinnati, is V.P.

Tex., Fort Worth.—Plans to build a railroad from a connection with the Gulf & Western Ry. in Palo Pinto County to Fort Worth, about 45 mi., are reported revived by Capt. B. B. Paddock, with whom are associated Geo. H. Colvin, Ben J. Tiller, L. H. Burney, Sam Davidson and E. D. Farmer. John H. Witt of Dallas has begun survey from Fort Worth to Salesville.

W. Va., Pemberton.—Virginian Railway Co. has let contract to the Walton Construction Co. of Falls Mills, Va., to build an extension from a connection with its new line between Pemberton and Fireco, 8 mi. It will require some heavy steam shovel work. H. Fernstrom, Norfolk, Va., is Ch. Engr.

## INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

### CIVIL and MINING ENGINEERING.

The firm of Stulting & Doyle, Huntington, W. Va., has been organized to engage in civil and mining engineering work in West Virginia, Kentucky and Virginia. They are prepared to furnish on short notice surveys, reports and other engineering data.

### Correct Address.

Engberg's Electric & Mechanical Works is located at St. Joseph, Mich., and not St. Joseph, Mo., as was erroneously stated last week in a news item regarding Bulletin No. 300, issued by the company describing Engberg's vertical self-oiling steam engines.

### Increases Warehouse Facilities.

On account of increased business the Doubleday-Hill Electric Co., 727 12th St. N. W., Washington, D. C., has erected a concrete warehouse on the same street, occupying a space 30x100 feet, which will be used to supply immediate Southern deliveries of its products. The company manufactures and deals in electrical supplies and carries a complete stock of high-grade material for lighting stations, telephone companies, electric railroads, contractors, mills, etc.

### Dunn Wire-Cut Lug Brick Licensee.

The Cleveland Brick & Clay Co., Cleveland, O., has been added to the list of licensees of the Dunn Wire-Cut Lug Brick Co. of Conneaut, O., and henceforth will make wire-cut lug paving brick. The company is a prominent paving brick manufacturing concern, which has a daily productive capacity of 60,000 blocks. J. L. Higley is president of the company and A. L. Hendershot is secretary.

### Consulting Engineer.

Colonel Malcolm H. Crump of Bowling Green, Ky., who for the past several years has been road engineer of Warren County, Ky., has submitted his resignation to take effect January 1 next. It is Colonel Crump's intention to devote his entire time to natural asphaltic materials for surfacing highways and to consulting work on oil and gas development and reports on same.

### Secures Power Plant Equipment Contract.

Entire contract for the steam power plant of the Yadkin Finishing Co., Salisbury, N. C., has been awarded to Thomas B. Whitted of Charlotte, N. C. The apparatus, which has been purchased, will consist of a steam turbine, switchboard, exciters, motors and

small "Form L" turbines manufactured by the General Electric Co., Schenectady, N. Y.; Manning type boilers furnished by the International Engineering Works, South Framingham, Mass.; condenser equipment from the C. H. Wheeler Manufacturing Co., Philadelphia, Pa.; centrifugal pump made by Morris Machine Works, Baldwinsville, N. Y.; feed-water heaters by the Hoppe Manufacturing Co., Springfield, O., and a radial brick chimney designed by the Alphons Custodis Chimney Construction Co., 95 Nassau St., New York.

### Witter Machinery in South.

Recent Southern installations of ice-making and refrigerating equipment furnished by the Witter Manufacturing Co., Milwaukee, Wis., include: Improvements to the Washington (D. C.) plant of the American Ice Co., consisting of over 9000 feet of expansion piping with hangers, valves and headers; Vacarco Bros., New Orleans, La., have made improvements to their Celina, Spanish Honduras plant by installing four coils double pipe type ammonia condensers; J. C. Peyton, El Paso, Tex., one 6½-ton refrigerating plant; Natchez (Miss.) Dressed Beef Co. one 20-ton ammonia compressor with high-pressure side; Wm. J. Lemp Brewing Co., St. Louis, Mo., 16 coils bleeder type ammonia condenser, and the El Paso (Tex.) Brewing Association has installed a 260-horse-power safety water-tube boiler furnished by the Witter Manufacturing Co.

### Establishes Two Southern Offices.

Increasing use of Heltzel steel forms in Southern concrete construction has caused the Heltzel Steel Form & Iron Co., Warren, O., to open two branch offices, from which the business of that territory will be handled. One of the offices is located in the Paul-Gale-Greenwood Bldg., Norfolk, Va., in charge of H. R. Leonard, and the other is in the Third National Bank Bldg., Atlanta, Ga., with L. Aronstan in charge. The company states its Southern representatives are capable men, thoroughly conversant with road construction, and will handle a complete line of steel forms for every conceivable type of road, pavement, highway and sidewalk construction, together with steel templates, steel floats for concrete roads, car unloader chutes, and a complete line of pressed steel products and special sheet steel work.

[Continued on page 76.]

# Sixth Annual Report of the Norfolk Southern Railroad Co.

Fiscal Year Ended June 30, 1916

Norfolk, Va., September 27, 1916.

To the Stockholders of the Norfolk Southern Railroad Company:

The Board of Directors submits the following report of the operation of your properties for the year ended June 30, 1916:

## INCOME STATEMENT.

Mileage Operated.	1916. 862.89	Steam Lines. 855.48	Increase. 7.41	Decrease.	1916. 44.82	Electric Lines. 44.56	Increase. .26	Decrease.	1916. 907.71	Combined Steam and 1915. 900.04	Electric Lines. Increase. 7.67	Decrease.
Total Operating Revenue.	\$4,352,642.77	\$3,625,662.20	\$726,980.57	.....	\$239,280.78	\$250,213.14	\$10,932.36	\$4,591,922.55	\$3,575,875.34	\$716,048.21	.....	.....
Total Operating Expenses.	2,844,777.29	2,754,031.99	50,745.30	.....	223,370.47	219,845.82	\$3,524.65	.....	3,068,147.76	2,973,877.81	94,269.95	.....
Net Operating Revenue.	\$1,507,865.48	\$871,630.21	\$636,232.27	.....	\$15,910.31	\$30,367.32	.....	\$1,523,775.79	\$90,997.53	\$621,778.26	.....	.....
Uncollectible Railway Revenue.	3,410.50	1,383.64	2,026.86	.....	9,600.50	8,618.94	\$381.56	.....	3,410.50	1,383.64	2,026.86	.....
Taxes Accrued.	139,350.08	122,323.69	17,066.39	.....	.....	.....	.....	148,330.58	130,342.63	17,447.95	.....	.....
Operating Income.	\$1,365,664.90	\$747,922.88	\$617,142.02	.....	\$6,500.81	\$21,748.38	\$14,838.57	\$1,371,974.71	\$69,671.26	\$602,393.45	.....	.....
Other Income*.	348,186.13	309,296.64	38,889.49	.....	\$83.46	\$2,130.84	\$3,024.30	.....	349,079.59	307,165.80	41,913.73	.....
Gross Corporate Income.	\$1,713,251.03	\$1,067,219.52	\$656,031.51	.....	\$7,503.27	\$19,617.54	.....	\$11,814.27	\$1,721,054.30	\$1,076,837.06	\$644,217.24	.....
Rent for Leased Roads Accrued.	\$77,396.00	\$77,956.02	.....	560.02	.....	.....	.....	.....	\$77,396.00	\$77,956.02	.....	\$560.02
Interest on Funded Debt Accrued.	866,784.31	869,040.56	2,256.25	.....	.....	.....	.....	.....	866,784.31	869,040.56	.....	2,256.25
Other Deductions†.	382,944.70	316,261.50	\$66,683.20	.....	\$2,919.47	\$3,069.94	.....	\$150.47	385,867.17	319,331.44	\$66,532.73	.....
Total Deductions.	\$1,327,125.01	\$1,263,258.08	\$63,865.93	.....	\$2,919.47	\$3,069.94	.....	\$150.47	\$1,330,044.48	\$1,266,328.02	\$63,716.46	.....
Net Corporate Income.	\$386,126.02	\$206,038.56	\$592,164.58	.....	\$4,583.80	\$16,547.60	.....	\$11,663.80	\$391,009.82	\$189,490.96	\$580,500.78	.....
Dividends.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Surplus.	\$386,126.02	\$206,038.56	\$592,164.58	.....	\$4,583.80	\$16,547.60	.....	\$11,663.80	\$391,009.82	\$189,490.96	\$580,500.78	.....
Per Cent. Total Operating Expenses to Total Operating Revenue.	65.36	75.96	.....	10.60	93.35	87.86	5.49	.....	66.82	76.73	.....	9.91
Per Cent. Total Operating Expenses and Taxes to Total Operating Revenue.	68.56	79.33	.....	10.77	97.11	91.31	5.80	.....	70.05	80.11	.....	10.06

\*Includes Credits account Hire of Equipment of \$291,459.92 for 1916 and \$256,341.90 for 1915.  
†Includes Debits account Hire of Equipment of \$327,796.45 for 1916 and \$259,951.42 for 1915.

‡Denotes Deficit.

## MILEAGE OPERATED.

The mileage operated June 30th (all lines) was as follows:

Main Line.	Second Track.	Sidings.	Total.
Owned 794,039	9,498	160,521	964,058
Leased 108,334	....	26,255	134,589
Total 902,373	9,498	186,776	1098,647
Track Rights—Main Line 5,340	1,230	....	6,570
Total Operated 907,713	10,728	186,776	1105,217

While the previous year's report shows the total main line mileage operated as 900.04 miles, there was no actual increase in this mileage during the year just ended, the difference between the figures for the two years being due to a resurvey made by the Department of Valuation of the Interstate Commerce Commission, which shows the correct mileage to be as above stated. There was an actual increase in miles of sidetracks operated of 3,055 miles.

## INCOME STATEMENT (STEAM LINES).

There was a substantial recovery during the year from the depression caused by the European War. It will be observed that Operating Revenues increased \$726,980.57, or 20.1 per cent., over the previous year, while Operating Expenses increased only \$90,745.30, or 13 per cent., as shown by the following tables:

### Operating Revenues.

	1916.	1915.	Increase or Decrease.	Per Cent.
Freight	\$3,160,009.54	\$2,499,205.65	\$690,803.89	26.4
Passenger	924,443.72	861,072.41	63,371.31	7.4
Miscellaneous Passenger Train Revenue.	11,310.51	11,637.06	*326.55	*2.8
Mail	65,798.11	65,774.16	23.95	.....
Express	101,162.99	97,562.51	3,600.48	3.7
Other Transportation Revenue	44,531.94	51,188.67	*6,656.73	*13.0
Other Revenue from Operation	45,385.96	39,221.74	6,164.22	15.7
Total Operating Revenues.	\$4,352,642.77	\$3,625,662.20	\$726,980.57	20.1

\*Denotes Decrease.

### Operating Expenses.

	1916.	1915.	Increase or Decrease.	Per Cent.
Maintenance of Way and Structures	\$516,239.19	\$489,635.05	\$25,546.14	5.4
Maintenance of Equipment	61,536.72	55,994.77	5,541.95	10.2
Traffic	84,564.51	82,010.60	2,943.91	3.6
Transportation	1,432,930.45	1,401,892.54	31,037.91	2.2
General	199,116.42	225,441.03	*26,324.61	*11.7
Total Operating Expenses.	\$2,844,777.29	\$2,754,031.99	\$90,745.30	3.3

Net Operating Revenue.

Taxes Accrued.

Uncollectible Railway Revenue.

Operating Income.

Ratio of Operating Expenses to Operating Revenues.

Ratio of Operating Expenses and Taxes to Operating Revenues.

\*Denotes Decrease.

## OPERATING REVENUES AND STATISTICS (STEAM LINES).

Gross operating revenue per mile of road for the past fiscal year, with comparison for each of the five previous years, is as follows:

1916. 1915. 1914. 1913. 1912. 1911.

\$5,044.26 \$4,214.51 \$4,731.77 \$5,859.60 \$5,424.36 \$4,900.13

Figures for the years 1914, 1915 and 1916 include the mileage of the new lines west of Raleigh, which yielded much lower gross revenue per mile of road than did the old lines east of that point.

## FREIGHT TRAFFIC.

Total revenue from freight traffic increased \$660,803.89, or 26.4 per cent.

Number of tons of freight carried increased 606,913, or 32.1 per cent.

Average distance each ton of freight was hauled was 98.25 miles, compared with 87.32 miles for the previous year, an increase of 10.93 miles, or 12.5 per cent.

Average amount received from each ton hauled decreased 3.8 per cent., and the average receipts per ton per mile decreased 14.9 per cent. These decreases were caused almost entirely by the heavy movement of stone for the Cape Lookout Breakwater, which yielded a much lower rate per ton per mile than did the average class of freight handled, and this in a measure also accounts for the increase in ton miles being of so much greater proportion than the increase in freight revenue.

Freight train revenue per train mile increased 12.8 per cent.

Average number of tons per train mile was 261.08, compared with 196.73 for the year 1915, an increase of 64.35 tons, or 32.7 per cent.

The average number of tons per loaded car mile was 16.50, compared with 14.10 for the previous year, an increase of 2.40 tons, or 17 per cent.

There has been very little change for a number of years in the volume of all other commodities since 1910 has reduced the percentage that lumber bears to our total tonnage from 65 per cent. to 42 per cent. This increasing diversification of traffic is very favorable, and marks progress in the right direction.

## PASSENGER TRAFFIC.

Passenger traffic did not keep pace with the improvement in freight traffic, nor has it yet reached the volume recorded during the year 1914. This may be attributed almost entirely to the operation of automobiles between various towns along the line of your road. When the severe depression in business occurred during the year 1914, many persons were thrown out of employment, and quite a number of them sought means of support by operating automobiles in competition with the railroads. The patronage of this means of transportation has been sufficient to warrant the continuance of this service, and there appears to be no ground for expecting an early diminution in the extent of this competition.

Total revenue from passengers increased \$85,371.31, or 7.4 per cent.

Number of passengers carried was 1,427,312, an increase of 60,079, or 5.1 per cent.

Average distance each passenger was carried was 29.49 miles, an increase of 1.46 miles, or 5.2 per cent.

Average revenue per passenger per mile was 2.197c., a decrease of .065c., or 2.9 per cent. Passenger train revenue per train mile was 87c., an increase of 4c., or 4.8 per cent.

Average number of passengers per train mile was 33, an increase of 3, or 10 per cent., and the average number of passengers per car mile was 11, an increase of 1, or 10 per cent.

## TRAFFIC EXPENSES.

Traffic expenses increased \$294.91, or 3.6 per cent. The ratio to gross revenue was 1.36 per cent., compared with 1.28 per cent. for the previous year.

## TRANSPORTATION EXPENSES.

Transportation expenses increased \$31,037.91, or 2.2 per cent., the ratio to gross revenue being 32.32 per cent. for the previous year.

## GENERAL EXPENSES.

General expenses decreased \$26,324.61, or 11.7 per cent. The ratio to gross revenue was 4.57 per cent., compared with 6.22 per cent. for the previous year.

## TOTAL OPERATING RATIO.

The ratio of total operating expenses to operating revenues was 65.36 per cent., compared with 75.86 per cent. for the year just ended.

## INDUSTRIAL TRACKS.

There were completed and placed in operation during the year 28 spur tracks to serve new industries. It is estimated that the annual revenue to your Company from these industries will be \$189,000. Eleven additional industries were located on your line to be served by spur tracks already installed, and which it is estimated will yield an annual revenue of \$35,000. The setback to all industrial development resulting from the European war, which depressed commercial conditions generally, began to recede during the early part of last fall, since which time there has been a marked improvement. The improvement is well reflected in the comparison of the estimated revenue your Company should receive per annum from new industries located on your line during the year, the amount being \$224,000, compared with \$75,000 during the previous year.

## AGRICULTURAL DEVELOPMENT.

The improvement in general business conditions has also had a tendency to promote agricultural development along your line. Inquiries for farm lands, especially in the drainage districts around Belhaven and Terra Ceia, N. C., have been numerous, and some large tracts of land have been sold in those sections. In the district near Terra Ceia the acreage in farm lands has been increased approximately 200 acres. Irish potatoes are being grown more extensively in the drainage districts now than ever before, yielding an average during the year of approximately 70 barrels per acre. The revenue from the handling of these potatoes and the inbound movement of fertilizer, seed potatoes and lime used in their cultivation brings your Company from \$21 to \$25 per acre.

In the territory in the vicinity of Beaufort, N. C., one firm has purchased for colonization purposes 37,000 acres of land, which will be drained and put in condition for settlers.

On what is known as the Sand Hill Section of North Carolina, traversed by the Aberdeen & Asheboro Branch of your line, there is a continual development of new lands, which are being planted in corn, cotton, tobacco, and especially peach trees. The shippers of peaches marketed from this section during the past season approximately 25,000 crates.

The Agricultural Department of your Company is systematically working toward an improvement in farming conditions and diversity of crops, as well as making every possible effort to secure new settlers to come in and take up lands not already under cultivation.

## ADDITIONS AND BETTERMENTS.

The following additional equipment was purchased during the year:

6 Consolidation Locomotives.

48 Ballast Cars.

98 Steel Gondola Cars.

2 Air Dump Cars.

During the night of November 16, 1916, the shops at Newbern, with the exception of the coach and paint shop, were destroyed by fire. Improved shop facilities have since been provided there, and the location of the various units so arranged as to greatly facilitate the work.

The erection of a steel working shop at Raleigh and equipping it with the necessary tools has enabled your Company to reduce the cost of steel underframes for your freight equipment by approximately 40 per cent.

Facilities for providing a better system of water supply and fire protection at Glenwood Yards, Raleigh, N. C., are nearing completion.

Contract was made on January 7, 1916, for the construction of locomotive and car repair shops at Carolina Junction, Va., 2.2 miles from Berkley, for the general repair of equipment. These shops will replace those now at Berkley, which are no longer adequate to take care of the necessary repair and construction work. It is expected that the new shops will be

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CAPITAL.	\$2,500,000
SURPLUS AND UNDIVIDED PROFITS.	2,189,000
	\$4,689,000

Total Resources Over \$35,000,000

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JOHN B. RAMSAY.....Vice-Pres., Chairman of the Board  
HENRY B. WILCOX....Vice-President  
JOHN B. H. DUNN.....Cashier

Accounts of Corporations and Firms Are Respectfully Solicited

### The National Exchange Bank OF BALTIMORE, MD.

Hopkins Place, German and Liberty Sts.  
Capital \$1,500,000.  
March 30, 1915. Surplus and Profits,  
\$850,000.00.

#### OFFICERS.

WALDO NEWCOMER, President.  
SUMMERFIELD BALDWIN, Vice-Pres.  
R. VINTON LANSDALE, Cashier.  
C. G. MORGAN, Asst. Cashier.  
Accounts of Mercantile Firms, Corporations, Banks, Bankers and Individuals Invited.

### Maryland Trust Company

BALTIMORE

Capital . . . . \$1,000,000

TRANSACTS A GENERAL TRUST AND BANKING BUSINESS

Correspondence and interviews invited

### The First National Bank OF KEY WEST, FLA.

United States Depository and Disbursing Agent.

Capital . . . . \$100,000  
Surplus and Undivided Profits : 40,000  
A general banking business transacted. Special attention given to collections.

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## MANUFACTURERS RECORD.

## FINANCIAL NEWS

### FINANCIAL CORPORATIONS

Ala., Birmingham.—Industrial Loan & Savings Co., capital \$25,000, with privilege of increasing to \$50,000, inceptd.; B. M. Allen, Pres.; D. J. Poncelet, V.-P. and Gen. Mgr.; Lawson E. Gambill, Secy. Treas.

Ga., Macon.—Notice is given that the Macon National Bank has purchased the Macon Savings Bank. By the deal, resources of the Macon National increase from approximately \$800,000 to \$1,500,000. H. T. Powell, Chmn. Board of Directors; Jesse B. Hart, Prest.; R. E. Findlay, Cash.; R. G. Jordan, Secy. and Treas., and O. E. Mendenhall, Asst. Secy. and Treas. Offices will be in the Bank of Commerce Bldg.

N. C., Mars Hill.—Mars Hill Bank chartered; capital \$25,000; business to begin when \$10,000 have been paid in. R. S. Gibbs, Prest.; J. P. Same, V.-P., and W. L. George, Cash.

N. C., High Point.—The High Point Morris Plan Co., capital \$40,000, expects to begin business about Nov. 15. H. A. Millis is Prest.; A. Sherrod, V.-P.; W. R. Morrow, Secy. and Treas., and O. E. Mendenhall, Asst. Secy. and Treas. Offices will be in the Bank of Commerce Bldg.

N. C., Mars Hill.—Mars Hill Bank chartered; capital \$25,000; business to begin when \$10,000 have been paid in. R. S. Gibbs, Prest.; J. P. Same, V.-P., and W. L. George, Cash.

N. C., Severn.—Bank of Severn is chartered; capital \$25,000; Incorporators, J. B. Stephenson, Archie Fleetwood and W. H. Maddrey.

N. C., Wilson.—Wilson Morris Plan Co., capital \$50,000, is inceptd. by Graham Woodard, F. S. Bridges and P. B. Deans.

Oklahoma, New Wilson.—City National Bank has made application for charter; capital \$25,000.

N. C., Rocky Mount.—A new bank is being organized, headquarters to be on South Main St. Among those interested are J. D. Blount, X. P. Keel, George T. Burnett, E. W. Sherin, T. T. Thorne, W. P. Jennings, J. B. Hall and others.

S. C., Shelton.—Bank of Shelton has been granted a commission; capital \$10,000. Petitioners: H. G. Colvin, W. B. Wright and J. R. Shelton.

Tex., Bartlett.—Bartlett Building & Loan Assn. is chartered; capital \$500,000. Incorporators: J. V. Morris, Wm. Branagan, D. D. Fairchild, Jr.

Tex., Fayetteville.—Farmers' National Bank has made application for charter; capital \$25,000.

Tex., Henderson.—First State Bank, succeeding the State Guaranty Bank & Trust Co., is inceptd.; capital \$25,000; surplus \$11,600. Hall Wood, Prest. and Cash.; W. V. Henson and S. L. Oliver, Asst. Cashs.

Va., Richmond.—Citizens' Building and Loan Assn. No. 16 inceptd.; capital \$50,000 to \$500,000; A. C. Becker, Prest.; C. A. Schmidt, Secy.

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Ky., Mt. Sterling—(Poor Farm).—\$15,000 of 4 per cent. 20-year Montgomery County bonds defeated.

Ky., Murray—(Light).—\$20,000 electric-light-plant bonds are voted. Address The Mayor.

Ky., Newport—(School, Incinerator).—\$150,000 high school and \$40,000 garbage incinerator bonds defeated.

Ky., Olive Hill—(Light, Water).—\$10,000 bonds are voted. Address The Mayor.

Ky., Paducah—(Road).—\$200,000 of 4½ per cent. 30-year McCracken County bonds are voted. Address Fiscal Court. Jas. M. Lang is County Judge.

Ky., Richmond—(Bridge).—Election is to be held in Madison County Dec. 7 to vote on \$50,000 bonds for bridge across Kentucky River. Address County Commsr.

Ky., Richmond—(Sewerage).—Election to vote on bonds will not be held until February or March. Samuel Rice is Mayor.

Ky., Versailles—(Water).—\$20,000 bonds are voted. H. C. Taylor is Mayor.

La., Alexandria—(Levee).—\$250,000 of 5 per cent. 10-year bonds Red River, Atchafalaya and Bayou Boeuf Levee Dist. have been sold to the Hibernia Bank, New Orleans, at \$12.50 premium.

La., Carencro—(School).—\$30,000 school district bonds will probably be issued. Address Board of Trustees.

La., Donaldsonville—(Road).—\$14,500 of 5 per cent. 18-year bonds First Dist., Ascension Parish, have been purchased at \$14,527 and interest by the Whitney-Central National Bank, New Orleans.

La., Lafayette—(Water).—\$20,000 water-works improvement bonds have been purchased by Powell, Garad & Co., Chicago.

La., Vinton—(Water).—Election is to be held to vote on \$20,000 water-works bonds. Address The Mayor.

Md., Annapolis—(State Road).—\$1,500,000 of 4 per cent. road improvement loan is to be put on the market. Address Board of Public Works in Annapolis.

Md., Oakland—(School).—\$30,000 of 5 per cent. \$1000 denomination, Garrett County, bonds defeated.

Miss., Ackerman—(Road).—\$25,000 Choctaw County bonds have been voted and sold. Address Board of Supervs.

Miss., Brookhaven—(Road).—\$175,000 Lincoln County 5 per cent. bonds have been purchased by William R. Compton Co., St. Louis, Mo., as follows: \$55,000 Dist. 4 at \$1025 premium and \$90,000 Dist. 2 at \$86 premium.

Miss., Charleston—(School).—Notice is given that the Board of Supr. Tallahatchie County propose on Dec. 4 to issue \$10,000 of 6 per cent. 25-year bonds for Agricultural High School of Tallahatchie County. D. S. Henderson is Chancery Clerk.

Miss., Clarksdale—(City Bonds).—Bids will be received until 8 P. M. Nov. 21 by R. E. Stratton, Jr., for \$100,000 5 per cent. bonds.

Miss., Columbus—(Light).—Petition has been introduced in the City Council asking that an election be called to vote on \$50,000 bonds for municipal electric-light plant. Address The Mayor.

Miss., Meridian—(School).—\$3500 6 per cent. \$100 denomination bonds Kewanee-Alamucha Consolidated School Dist., Lauderdale County, have been purchased by the First National Bank of Meridian, Miss., at \$90 premium and accrued interest.

Miss., Hattiesburg—(Road).—Board of Supervisors, Forrest County, is considering the question of issuing \$50,000 bonds for Beats 2, 4 and 5 each. Address The Mayor.

Mo., Bowling Green—(Courthouse).—\$100,000 of 4 per cent. 20-year Pike County \$500 denomination bonds are voted. C. M. Davis is County Clerk.

Mo., Carl Junction—(Sewer).—\$20,000 bonds are voted. Address The Mayor.

Mo., Eldorado Springs—(Water-works).—Bids will be received until 8 P. M. Dec. 5 for \$20,000 of 5 per cent. 10-20-year \$500 denomination bonds, dated Jan. 1, 1917. C. R. Ryan is City Clerk. (Recently noted.)

Mo., Linn—(Road).—\$300,000 Osage County bonds defeated.

Mo., Osceola—(Railroad Aid Redemption).—Election is to be held in St. Clair County Dec. 12 to vote on \$630,000 railroad aid redemption bonds. Address County Commsr.

Mo., Salem—(Road).—Bids will be received until Jan. 1 by James H. McDonald, Clerk Dent County, for \$160,000 of 4½ per cent. 1-20-year bonds.

Mo., St. Louis—(School).—\$3,900,000 bonds are voted. Ben B. Armstrong is Prest. Board of Education.

N. C., Belhaven—(Light, Water, Sewer).—Sale of the \$60,000 5 per cent. 30-year bond issue was enjoined. Hearing will be Nov. 25. John G. Tooly is City Atty.

N. C., Elizabethtown—(Road).—\$20,000 of 5 per cent. 20-year bonds White Oak Township, Bladen County, have been purchased at par by W. L. Slayton & Co., Toledo.

N. C., High Point—(Railroad Ald).—Election is to be held Dec. 20 to vote on \$25,000 bonds in aid of the Carolina & Yadkin River Ry. Address Board of City Commsr.

N. C., Jackson—(School).—Bids will be received until noon Dec. 2 by Board of Education for \$3000 of 6 per cent. 5-12-year \$500 denomination Woodland Special School Dist. and \$3000 6 per cent. 3-9-year Milwaukee Special School Dist., Northampton County, bonds. Address P. J. Long, Jackson.

N. C., Wake Forest—(School).—Election is to be held Dec. 19 to vote on \$25,000 bonds Wake Forest School Dist. Address Board of Trustees.

Okla., Dewey—(Park).—\$15,000 of 6 per cent. 10-year bonds have been purchased by the Guardian Trust Co., Denver.

Okla., Arnett—(Water).—\$65,000 6 per cent. 25-year bonds are voted. Address The Mayor.

Okla., Bartlesville (School).—Special dispatch to the Manufacturers Record says \$100,000 of bonds are voted and will be sold at public sale. F. E. Turman is Clerk Board of Education.

Okla., Beaver—(Road).—Liberal Township, Beaver County, is planning to call an election to vote on bonds. Address County Commissioners.

Okla., Beggs—(Water, Sewer).—\$42,000 water-works and \$18,000 sewer 6 per cent. 25-year bonds are voted. C. J. Brace is City Clerk.

Okla., Cyril—(Water-works).—Election is soon to be called to vote on bonds. Address The Mayor.

Okla., Duncan—(Light, Water).—\$5000 Light and \$6000 water-works 6 per cent. \$1000 denomination bonds have been purchased by Robinson & Taylor, Oklahoma City.

Okla., Enid—(Water).—\$30,000 bonds defeated.

Okla., Fairview—(City Hall).—\$30,000 of 6 per cent. 25-year bonds have been purchased by Geo. A. and J. E. Piersol, Oklahoma City.

Okla., Lehigh—(City Hall, Jail).—Election ordered for Nov. 7 to vote on \$5000 bonds is postponed indefinitely. Bonds have already been sold. Address The Mayor.

## Municipal Bonds Purchased

Correspondence invited from investors wishing to sell their holdings of seasoned marketable Municipal Bonds, and from municipal officials and contractors in connection with entire new issues.

**THE NATIONAL CITY COMPANY**  
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**\$200,000**  
**City of Macon (Georgia) 4½% Bonds**

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NEWPORT NEWS, VA.

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Rooms single and en suite.

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BOSTON, MASS.

European Plan  
Rates Moderate  
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Free Transfer Baggage from and to Station.  
Terminal of Trains from South and West.

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Weymouth Heights, Southern Pines, N. C.

"JUST FAR ENOUGH SOUTH"

(Every Modern Convenience and Luxurious Appointments)

Open from December 1st to May 1st

SUPERB CLIMATE. Not too cold or yet too hot. The resort with the just-right weather.  
ACCESSIBILITY. Only a day or a night from New York or Florida or the splendidly equipped trains of the Seaboard Air Line Railway.

Extensive and delightful views in all directions. Adjacent to 18-hole course of Southern Pines Country Club. Good automobile roads. Excellent hunting. Consumptives not received.

A. I. CREAMER, M. H. TURNER, Proprietors.

Oklahoma, Frederick—(Water-works).—City is reported considering the question of holding an election to vote on bonds. Address The Mayor.

Oklahoma, Okmulgee—(Road).—\$80,000 of 5 per cent. 25-year \$1000 denomination bonds are voted and will be advertised for sale. C. Goree is County Clerk.

S. C., Bishopville—(Sewer, Water).—Election is to be held Dec. 12 to vote on \$35,000 sewer and \$10,000 water bonds. W. L. Parrott is Mayor and W. S. James, Clerk.

S. C., Clinton—(School).—\$27,500 of 5 per cent. 20-year \$500 denomination bonds School Dist. 5, Hunter Township, Laurens County, have been purchased at \$117 premium by First National Bank.

Tenn., Decaturville—(Road).—\$125,000 Decatur County bonds defeated.

Tenn., Manchester—(Road).—\$250,000 Coffee County bonds defeated.

Tenn., Murfreesboro—(School).—\$75,000 of 5 per cent. 20-year bonds have been purchased by J. W. Jakes & Co., Nashville.

Tenn., Spencer—(Railroad Aid).—Election is to be held in Van Buren County Dec. 2 to vote on \$75,000 bonds. C. M. Clark is Clerk Chancery Court.

Tex., Amarillo—(School).—\$50,000 Independent School Dist. bonds recently voted are 40-year 5 per cents; denomination \$1000. S. F. Newbold is Secy. Board of Education.

Tex., Austin.—Bonds approved by Attorney-General: \$16,000 of 5 per cent. 10-year Quanah sewer; Dist. 24, \$1500; Dist. 13, \$2000; Dist. 19, \$2000 of 5 per cent. 5-20-year Stonewall County School; Haskell County School Dists. 20-year 5 per cents, as follows: Dist. 39, \$1600; Dist. 47, \$1200; Dist. 20, \$1600; Dist. 38, \$1200; Dist. 24, \$1200.

Tex., Barstow—(Irrigation).—\$50,000 Irrigation bonds of Ward County Irrigation Dist. No. 1 have been purchased by E. L. Thwing & Co., San Antonio. It is also stated that the company will purchase bonds of Ward County Irrigation Dist. No. 2 at Grand Falls and Big Valley.

Tex., Bryan—(Sewage-disposal Plant).—\$10,000 bonds are voted. Address The Mayor.

Tex., Center—(Street).—\$20,000 of 6 per cent. 5-25-year warrants have been purchased by Arlitt Bros., Austin.

Tex., Center—(Road, Bridge Warrants).—The \$120,000 Shelby County time warrants to be issued will be 30-year 6 per cents; denomination \$1000. T. H. Postell is County Judge.

## INDUSTRIAL NEWS OF INTEREST

[Continued from page 72.]

### To Develop Magnesite.

Organization of the United States Magnesite Corporation, 11 Pine St., New York, has been effected to mine, mill and ship all grades of magnesite, including the crude, calcine, dead burned, also calcined and ground magnesite. It is stated the company is now in position to offer all grades of foreign and domestic magnesite of the highest quality.

### Improvements Cost \$30,000.

Improvements which have been made throughout the year by the American Bolt Co., Birmingham, Ala., amount to about \$30,000, and constitute principally rehabilitating the entire plant, such as making general repairs of the buildings, erection of a mill-constructed tapping-room and a building for additional storage-room. In the machinery department the company has added three bolt machines and three double-head and two single-head threading machines. Machine, carriage, track, heel and blank bolts, square, hexagon nuts, anchors, plates, washers and upsets, and all kinds of bridge and building rods are manufactured by the American Bolt Co.

### TRADE LITERATURE

#### Booklet for Engine Buyers.

"Inside Information" is the title of a new booklet issued by the Bruce-Macbeth Engine Co., 2125 Center St. N. W., Cleveland, O. It is an attractive, well-printed book, showing views of engine-rooms in which Bruce-Macbeth gas engines are in use, and gives figures and facts as to results obtained through their operation. A partial list of users of Bruce-Macbeth gas engines is also included, which shows the character of firms that have installed these engines. As stated by the company, the purpose of the booklet is to present definite evidence to substantiate beyond dispute that Bruce-Macbeth gas engines are of proven worth. It contains just the kind of information the contemplating pur-

Tex., Comanche—(Road).—Election will probably be called in Precinct No. 4, Comanche County, to vote on bonds. Address County Comr.

Tex., Dallas—(Road).—\$400,000 Dist. 5, Navarro County, bonds have been voted and sold. R. R. Owen is County Judge.

Tex., Dallas—(Levee).—\$48,000 bonds Dallas County Levee Improvement Dist. No. 1, Dallas County, recently voted, are to be issued. Address County Comr.

Tex., El Campo—(Warrants).—\$5000 of 6 per cent. warrants have been purchased by J. L. Arlitt, Austin, Tex.

Tex., El Paso—(City Improvements).—Election is to be held Dec. 19 to vote on \$225,000 bonds as follows: Septic tanks \$100,000; storm sewer \$75,000; street \$40,000; sewer extension fund \$40,000. Tom Lee is Mayor.

Tex., Lockhart—(Sewer).—\$35,000 of 5 per cent. 5-40-year \$500 denomination bonds have been purchased at \$145 premium by Halsey, Stewart & Co., Chicago.

Tex., Newcastle—(Water).—Election will probably be called to vote on water-works bonds. Address The Mayor.

Tex., Palestine—(Road).—Election is to be held in Anderson County to vote on \$400,000 bonds. Address County Comr.

Tex., Palestine—(Road).—Election is to be held in the near future in Frankston Community, Anderson County, to vote on \$25,000 bonds. Address Board of Comr.

Tex., Rusk—(Road).—Bids received Nov. 15 for \$250,000 of 5 per cent. 40-year Road Dist. No. 1, Cherokee County, \$1000 denomination bonds; dated Nov. 1, 1916. Address C. F. Gibson, County Judge. E. D. Spink is County Clerk.

Tex., San Augustine—(School).—\$5000 of 5 per cent. 40-year Independent School Dist. bonds have been purchased at par and accrued interest. Address School Board.

Tex., San Angelo—(Paving).—Election will probably be held to vote on \$25,000 bonds. Address The Mayor.

Tex., Waco—(Bridge).—\$25,000 bonds are voted. Address The Mayor.

Tex., Wichita Falls—(Park, Cemetery).—\$15,000 bonds are voted. Address The Mayor.

W. Va., Grafton—(Road).—\$100,000 of 5 per cent. 34-year Knottsville Dist., Taylor County, bonds defeated.

chaser of a gas power plant is interested in knowing about the equipment he is considering. A copy will be sent free to interested persons upon request.

### Electric Industrial Truck.

Description of construction, with illustrations, of the Crescent electric industrial truck, type "F," is given in a pamphlet issued by the Samuel L. Moore & Sons Corporation, Elizabeth, N. J. Strength, combined with simplicity of design and operation, has been the aim of the builder of the Crescent electrical truck. All mechanical parts are exposed when the hinged platform is raised, giving access to the motor, controller, wiring, brake, battery, etc. The spur and worm drive is completely enclosed as protection against dirt and dust. The truck is especially designed for severe working conditions, and is built to run without recharging at a speed of five to seven miles per hour with a full load of 4000 pounds for a working day of 8 hours.

### Giant Gas Engines.

Recognizing the growing importance of the gas engine as an industrial factor, the Chicago Pneumatic Tool Co. of Chicago has given special attention to the development along lines of the highest efficiency of its "Giant" gas engine, which is fully described in Bulletin 34-X. The engine is said to operate satisfactorily on any manufactured or natural gas containing 600 British thermal units or more per cubic foot, and as most gases, whether manufactured or natural, contain at least this number of heat units, it can be installed profitably in many sections of the country. The "Giant" gas engine is adapted for driving electric generators, fans, centrifugal and horizontal pumps, vertical triplex pumps, oil-well powers, refrigerating machines, stone crushers, bolting, line shafting, etc. It is in use in mines, machine shops, boiler shops, foundries, iron plants, quarries, stamp mills, planing mills, flour mills, cotton gins, laundries, printing offices and manufacturing plants of all kinds.

[Continued on page 81.]

**TRADE LITERATURE**

[Continued from page 76.]

**Wall Brackets for Wiring.**

Bulletin No. 600 illustrates and describes "National" wall brackets for electric wiring purposes, which are manufactured by the National Metal Molding Co., Pittsburgh, Pa. The brackets are said to have been designed with the view of improving appearance of service connections, to insure greater security and to reduce distribution costs. Types made and illustrated in the bulletin include one, two and three-point brackets, and corner chairs, a combination of fixtures which is said to make possible practically any service connection.

**Link-Belt Equipment.**

Modern coal and ash handling machinery as installed by the Link-Belt Company of Chicago in the power plant of the Victor Talking Machine Co. at Camden, N. J., and in the power-house of the W. H. Grundy Co. at Bristol, Pa., is illustrated and described, respectively, in booklets No. 296 and No. 283. A full description of the systems employed, with diagrams showing general scheme of

the equipment installed at the plants, is given in each of the booklets, which are profusely illustrated with views of different parts of the machinery.

**Girls' College Catalogue.**

Limestone College, established in 1847 at Gaffney, S. C., which takes its name from the limestone springs near Gaffney, has issued its catalogue for 1916-17. It is a well-known school for girls, and has had a long and enviable career. Two complete departments—seminary and college—are conducted, providing for very young students as well as those desiring advanced work. The curriculum is broad and comprehensive; five groups of courses are arranged, each leading to the A.B. degree, giving ample scope for selection on the part of the student. An examination of the catalogue discloses the care which is taken in giving students a thorough training not only in the sciences, but in history and languages, past and present. Limestone College claims it was one of the first institutions in the South to introduce the study of comprehensive literature, and it is noticeable that, without sacrificing any time that should be very properly devoted to the study of languages or natural sciences, a very prominent place is given to such need-

ful branches as the history of civilization and political science. Our girls today do not have to confine their education to the narrow bounds of schools of even a comparatively short time ago. For example, we read from the list of studies set forth in the

catalogue chemistry, psychology, philosophy of education, geology, international law, theory of the State, etc. A special commercial course is provided, also courses in domestic science, physical culture, music and art.

## THOSE CITIES AND TOWNS CONTEMPLATING IMPROVEMENTS

Will be interested in learning that

## We Handle Municipal Bonds

And also accept them as part payment for any work we do.

**WE BUILD** { **Sewer Systems**  
**Water Systems**  
**Lighting Plants**  
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**Municipal Improvements**

We have an engineer in every locality, who will gladly confer with public officials regarding the construction and financing of the most suitable types of improvements, and also lend any other assistance within his power.

Let us hear from you before you decide on any public work.

## U. S. Sanitary Septic Tank Co.

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## CONVERSE COLLEGE

SPARTANBURG, S. C.

is one of the only six women's colleges in the South honored by membership as a standard college in "The Association of Colleges and Preparatory Schools of the Southern States." Its B.A. degree is accepted by the highest grade Colleges and Universities, and admits, without further work, to candidacy for the M.A. degree. It has separate science, music and library buildings; dormitories limited to 190; gymnasium and infirmary; 42-acre campus, and 38 teachers and officers. It is 35 miles from the Blue Ridge Mountains, and has an ideal winter climate. It owes no debts, and has an endowment. It is accessible North, East, South and West by six lines of railway. If you wish a catalogue, address

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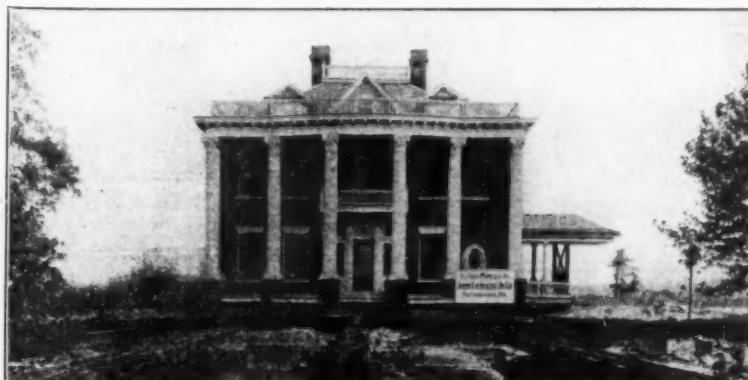
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We have men and material at different places in the South where we are doing work at present.

Inquiries on above work solicited and will be promptly attended to. Send for Booklet.

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Three-story Brick, 50' x 75'. Raised 4', quarter turned, and moved 300'.

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PITTSBURGH, PA.

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**MANGANESE.**—For sale, tract of land containing valuable deposit of manganese. Actual test shows nearly 700,000 tons in sight. Engineer estimates over two million tons. Plenty of water on the property. The same property contains a valuable deposit of kaolin, also iron ore. The price of this property is only \$200,000. Full engineer's report will be furnished to responsible parties who are interested. P. A. Green & Co., Room 11 Real Estate Exchange, Richmond, Va.

**WE WILL SELL**  
1,000,000,000 feet hardwood timber near Atlantic Coast at a bargain.  
600,000 acres fine farming lands, State Miss., \$6 up to \$50 per acre—homes for all.  
4000 acres fine quality iron ore land.

All great bargains. Correspondence solicited. A. L. Gardner Land Co., 120 Madison St., Memphis, Tenn.

**FOR SALE?** Farm, timber land, mineral property or any other? We can help you get in touch with possible purchasers by an advertisement in these columns. For rates see head of this department.

**SILICA PROPERTY**  
**SILICA PROPERTY FOR SALE.**  
Splendid opportunity for  
**GLASS MANUFACTURER.**

Property consists of about 280 acres of 99% silica sand on Severn River, near Chesapeake Bay, 40 miles by water from Baltimore, 23 miles by land, 7 miles from Annapolis. This is a splendid opportunity for manufacturer of glass for export. Sand can be used for silica of soda, scouring compounds, white tiles, cement, glass, etc. For further particulars address W. E. Ferguson, 217 St. Paul St., Baltimore, Md.

### ZINC LAND

**ZINC LAND.**—340 acres proven mineral land in Arkansas at big bargain and easy terms. On January 1, 1917. W. J. Robinson, Box 717, Joplin, Mo.

### WHITE MARBLE QUARRY

**FOR SALE**—The whitest white marble in the country; will stand a pressure of 23,000 lbs. to square inch. The quarry is inexhaustible and is within 50 yards of a railroad. Address Capt. W. N. Hughes, U. S. A., 533½ Broadway, Nashville, Tenn.

### LIMESTONE

**OOLITIC LIMESTONE.**—For sale, 40 acres, almost solid, highest quality, 1 mile from R. R. Samples sent on request. Wm. Maloney, Owner, 215 S. 12th St., Gadsden, Ala.

### GOLD PROPERTY

**NEW GOLD FIELD.**—The Georgia Gold Mining Company has undeveloped gold property in the coming gold belt of the county. You can't make any mistake in learning about this property. Write about it, ask about it, come and see it, know for yourself. Stock brokers need not answer this advertisement; no stock for sale. Georgia Gold Mining Co., at the Mine, Tallapoosa, Ga.

### IRON AND MANGANESE DEPOSITS

**FOR SALE**—90-acre mining property; iron, manganese and yellow ochre; spur track to main line; abundant water. Also, other valuable brown and red iron ore tracts. Box 908, Cartersville, Ga.

**FOR SALE**—Valuable deposit manganese and magnetic iron. Analysis iron 67.73%; manganese 45.54%. This ore recently located Piedmont Virginia. Never been exploited. Will sell mineral right or lease royalty basis, reliable party. Jos. M. Samuels, Orange, Va.

### UMBER PROPERTY

**UMBER PROPERTY FOR SALE.**—The largest and only commercial vein of genuine umber in the U. S. for sale. Vein is 4 to 5 ft. thick, covering large area. Price \$50,000. Well prospected. Brokers and agents, write for listing. Address T. W. Glover, President, Guntersville, Alabama.

### COAL MINE

**FOR SALE**—Coal mine fully equipped and 2000 acres coal land near Jellico, Tenn. Now operating. James L. Heffernan, Jellico, Tenn.

### COAL LANDS

**COAL LANDS.**—West Virginia coal lands, located on Norfolk & Western Railway, adjoining present coal operations, which coal is commanding the top prices being paid for coal at the present time. A bargain for an immediate investor. Address No. 2033, care Manufacturers Record, Balt., Md.

**WANTED**—A reliable party or company who would be interested in the purchase of a 110,000-acre bituminous coal property. I have the best proposition in Virginia, but it's a big one. Titles absolutely perfect. Offer is open but a few weeks. Address P. O. Box 596, Buffalo, N. Y.

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Rate 25 cents per line per insertion. Minimum space accepted, four lines. In estimating the cost, allow seven words of ordinary length to a line. When the advertisement contains a number of long words, proper allowance should be made. Terms: invariably cash with order; check, postoffice or express order or stamps accepted. No display type used. Questionable or undesirable advertisements will not be accepted. The assistance of our readers in excluding undesirable advertisements is requested. We reserve the right to refuse any advertisement. No patent medicine, whiskey or mining stock advertisements accepted. Rate for special contracts covering space used as desired within one year as follows: 100 lines, 23c. per line; 300 lines, 21c. per line; 500 lines or more, 20c. per line.

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**COAL FOR LEASE ON ROYALTY.** ACCESSIBLE LOCATION. ECONOMIC OPERATION AND DISTRIBUTION.

(1) Compact body of 5500 acres of bituminous coal land, bisected by the 500-foot-deep valley of a large stream which, with its three affluents, affords easy access by drift mining to numerous level coal seams from 4 to 6 feet thick. (2) Trunk-line railroad on the property, which is 15 miles from Chattanooga, a great railroad center. (3) Different companies, now in full operation, have mined millions of tons up to and along the north and the east lines of this property. (4) 200 acres of cultivated level land along the trunk-line railroad tracks for yards and coking operations, with easy down-grade delivery therefrom. (5) No incumbrances. (6) Plenty of mine timber on the property. (7) Coal is of steaming and coking quality, part identical with Govt. report upon Connellsville coal. (8) Can be leased as whole or in parts. Address Cumberland, 606 Coal Exchange, Wilkes-Barre, Pa.

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**KENTUCKY COAL LANDS.**—5000, 20,000, 50,000-acre tracts for sale. Best coal in America.

Some good coal operations for sale. Several large and small timber tracts, direct from owners, cheap.

John B. Williams, Catlettsburg, Ky.

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**FOR SALE—BY OWNERS.**—Several tracts hardwood timber, white oak and chestnut oak, in boundaries from 2,000,000 to 15,000,000 feet, located on Chesapeake & Ohio Railway in Alleghany county, Virginia; also on branch Norfolk & Western Railway in Craig county, Virginia, and Monroe county, West Virginia. Address "Timber," P. O. Box 365, Charleston, W. Va.

**FOR SALE**—About three hundred and seventy-five million feet of the highest grade and quality of virgin long-leaf yellow pine. For particulars address H. H. Wefel, Jr., Mobile, Alabama.

### TIMBER LAND

#### TIMBER LAND BARGAIN FOR INVESTOR OR OPERATOR.

15,000 acres virgin long-leaf yellow pine in progressive Manatee County, Fla., \$6 per acre in fee. On trunk line Ry. and near seaport. Good logging. Will cut 2500 feet saw log and 40 turpentine boxes per acre. Excellent farming land after timber is removed. Adjacent colony lands retailing for \$50 per acre. Owner will meet prospective buyer in Jacksonville. Write R. W. Barnwell, 621 Candler Blvd., Atlanta, Ga.

#### VALUABLE TIMBER TRACT FOR SALE

on large navigable river, near Wilmington, N. C.; 7500 acres in fee. In one tract, fronting four miles on river. Will cut FIFTY MILLION FEET, mostly pine, balance cypress, poplar and gum. Most of timber on four thousand acres with average haul of one mile to the river. Price attractive. Address Charles N. Riker, Real Estate Trust Building, Washington, D. C.

**FOR SALE—TIMBER.**—50,000,000 pine at \$2.30. Two exceptional oak tracts, 8000 and 18,000 acres; four red gum tracts, 10,000, 12,000, 23,000 and 25,000 acres. Write for particulars. Fred King, Jr., 1515 Exchange Blvd., Memphis, Tenn.

**FOR SALE**—400 acres of timber land. Timber consists of chestnut, oak, poplar, wild cherry, etc. Located near Great National Road in Fayette County, Pa. Address Andrew Stewart, 1442 Clifton St. N. W., Washington, D. C.

**TIMBER TRACTS FOR SALE.**—I have some choice timber tracts that are a bargain for the price offered. Let me know what you want by addressing L. N., P. O. Box 596, Buffalo, N. Y.

### FARM AND TIMBER LANDS

#### SOUTHERN LANDS.

We are prepared to furnish desirable farm lands, undeveloped and developed, and stocked, also hardwood and pine timber and cut-over lands, in any size tract wanted, in Ala., Miss. and La. These lands are exceptionally cheap and offer an attractive opportunity for investment. We also have some large farms to trade for city property. We are anxious to get in touch with people interested in these classes of properties and solicit correspondence. Bailey-Jones Real Estate & Ins. Co., Birmingham, Ala.

### FLORIDA

**FLORIDA HOME** on the Indian River for sale. Grove, packing and boat house. Write for descriptive circular. C. T. Bellfield, Merritt, Fla.

### FOR SALE.

735 acres, Ocklawaha River valley land, suitable for truck, fruit, general farming and stock; no improvements. Price \$1000 per acre. No exchange. John M. Graham, Ocala, Fla.

### FOR SALE.

**6560 ACRES IN FLORIDA.**  
**WHOLESALE PRICE.**  
**WILL NOT RETAIL.**

Located on the East Coast, in Volusia County; price \$10 per acre; \$1 per acre down, balance \$1 per acre per year, 6 per cent, interest on deferred payments; 8 miles west of New Smyrna, Fla.; on the Orange City branch of the Florida East Coast R. R.; Indian Springs Station is only ¼ of a mile from it; 2250 acres are "prairie land." Has an elevation of about 22½ to 41 feet above the tidewater; top soil is a black sandy loam, underlaid with clay. Would make an ideal stock range. There are forty families farming in the adjoining sections; some have raised 45 to 50 bushels of corn to the acre. Barrels of Irish potatoes, and all kinds of garden truck, such as lettuce, beans, peas, Bermuda onions, besides good crops of rice, oats and grasses for feed. Title good. Owned in fee-simple, without incumbrance. Other information will be furnished upon request by E. C. Howe, 747 Hartford Bldg., Chicago, Ill.

### REAL ESTATE BARGAINS.

For high-grade orange groves, winter homes, city property, timber tracts, Florida cattle ranches and other properties of all kinds consult

The Warling Realty Co., Orlando, Fla.

**FOR SALE**—Florida orange and grapefruit groves and truck lands; improved or unimproved. The size of tracts ranging from 10 acres up, totaling 1500 acres. Prices vary on account of location, quality of soil and value of improvements. All of my properties are convenient to rail and water transportation and hard-surfaced roads. The lands are on or near Terra Ceia Bay. F. C. Armstrong, Terra Ceia, Fla.

### GEORGIA

**BEAUTIFUL COLONIAL ESTATE IN GEORGIA.**—Ideal Southern home. Owned dead. Must be sold. Typical ante-bellum colonial mansion in stately grove of holly, beech and magnolias; model improvements in excellent repair; 800 acres, good land; peach and pecan section; near progressive town; glorious climate; pure water; perfect health. Complete description on request. Answer quick. J. H. Napier, Macon, Ga.

**EIGHT HUNDRED ACRES** of high land, 4 miles from Savannah; two railroads; half cleared and under cultivation; fully equipped for dairy or stock raising; all fenced; good improvements. Will take part cash and exchange balance for city property. Skellington & White, Savannah, Ga.

### MARYLAND

**FOR SALE**—Fifteen acres of land, with 1 room, furnace-heated house thereon, situated in Prince George's County, Md., within 20 minutes' walk of a car line into Washington; outhouses and orchard. Write R. C. Blackford, Lynchburg, Va.

### MISSISSIPPI

**IMPROVED AND PASTURE LAND.**—Lumber firm disposing of farm and unimproved pasture land at closing-out prices in rich Mississippi Yazoo Delta. For particulars address Houston Bros. Lumber Co., Vicksburg, Miss.

### NORTH CAROLINA

**FOR SALE**—Best improved farm in Eastern North Carolina. 722 acres, 350 cleared, \$10,000 in buildings; 3 miles from county seat; 2 railroads, water transportation, good schools, roads and drinking water; located in drainage district. \$35 per acre. Address E. J. Conklin, Plymouth, N. C.

**FOR SALE**—200-acre farm in good section. School, church and railroad depot near. Good crop this year. Write J. J. Beard, Robeson Co., N. C.

**75 EASTERN NORTH CAROLINA FARM FOR SALE.** Write for booklet. Joe A. Parker, Goldsboro, N. C.

### TENNESSEE

**FOR SALE**—1500 acres of unimproved land in Coffee County, Tenn.; \$6 per acre. Good investment in the world. Write C. A. Stewart, Hamilton Bank Bldg., Chattanooga, Tenn.

### TEXAS

**THE PANHANDLE** of Texas, where the biggest wheat crops in the South grow. Where the White faces, that make excellent beef, roasts. Where I can sell you one acre or 100,000 acres of land. Reference, any bank in Amarillo. S. G. Carter, Amarillo, Tex.

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